Supreme Court, U.S.
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No.

IN THE

Supreme Court of the United States

Mitchell R. Swartz, *Petitioner*

v.

Nicholas P. Godici,
Commissioner for Patents,
Respondent

On Petition For A Writ Of Certiorari
To United States Court Of Appeals
For The Federal Circuit
02 - 1240
(Serial No.: 08-406,457)

IN RE MITCHELL R. SWARTZ

Appeal from the Board of Patent Appeals
and Interferences
(No. 98-2593)

PETITION FOR A WRIT OF CERTIORARI

Mitchell R. Swartz, ScD, MD, EE
P.O. Box 81135
Wellesley Hills, MA 02481-0001

April 17, 2003

73 PP

QUESTIONS PRESENTED

Did the Decision Misread the Claims of the Present Application under 35 U.S.C. §101 and 35 U.S.C. §112.

Whether The Office Failed The Standards Of Review By Ignoring Testimony of Declarants Skilled-in-the-art under 35 U.S.C. §112 and 35 U.S.C. §101.

Whether The Office Failed The Standards Of Review By Ignoring Evidence Including *Fusion Technology '97* under 35 U.S.C. §112 and 35 U.S.C. §101.

Whether The Office Failed The Standards Of Review And 18 U.S.C. §1001 By Making False Statements or Writings of Temperature and Voltage.

Whether The Office Has Complied with the Authority of the United States Constitution and Congressional Will.

LIST OF PARTIES

Not all parties appear in the caption of the case on the cover page.

The list of all parties proceedings in the Court is as follows:

Petitioner, previously Applicant then Appellant, Dr. Mitchell Swartz, P.O. Box 81135, Wellesley Hills, MA 02481-0001.

Respondent is the Office of Patent and Trademarks [the U.S. Patent and Trademark Office and the Board of Patent Appeals and Interferences, hereinafter "Office"]. The Examiner has been Mr. Daniel Wasil. Mr. Nicholas P. Godici, is Commissioner for Patents.

The Respondent's attorney of record is Attorney Thomas Krause, Associate Solicitor, 2121 Crystal Drive, P.O. Box 15667, Arlington, Virginia, 22215. With him has been John Whealan, Solicitor, U.S. Patent and Trademark Office, of Arlington, Virginia, and Stephen Walsh.

The *amici curiae* who have submitted Briefs to this court previously in 00-1191, and who submitted their unentered briefs to the court of appeals in the above-entitled case after receiving permission to enter said brief from the respondents, are

Eugene F. Mallove, Sc.D., *amicus curiae*, New Energy Research Laboratory (NERL), P.O. Box 2816, Concord, New Hampshire 03302-2816

Scott R. Chubb, Ph.D., *amicus curiae*, Research Systems, Inc., 9822 Pebble Weigh CT., Burke, VA 220215-3378

Hal Fox, Ph.D., *amicus curiae*, Engineer, Editor, 3084 E. 3300 South, Salt Lake City, UT 84109-2154

The panel in the court below, U.S. Court of Appeals for the Federal Circuit, were Judges Clevenger, Friedman and Prost.

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**** The other notations used herein are to the Petitioner's original patent specification (OS) to the Patent Office, the Appeal Brief to the Board of Patent Appeals and Interferences (APB), the Board Decision (D), and the Appendix was submitted with the Appeal Brief to the US Court of Appeals For The Federal Circuit (A).

Table of Authorities

Selected Statutes	
U.S.Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H. R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952)	1,26,29
Selected Federal Case Law	
Bivens v. Six Unknown Named Agents of Fed. Bureau of Narcotics	27
Bloom v. Illinois, 88 Ct. 499 S.Ct. 1477	27
Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141 (1989), 489 U.S. 141, No. 87-1346, quoting Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 6 (1966)	28
Chelebda v.H.E. Fortuna & Brothers Inch 609 F.2d 1022 (1st Cir. 1979)	20
Chisum on Patents, 4.04[4] [1983]	10
Cross v.Iizuka, 753 F.2d 1040, 1044 n.7, 224 USPQ 739, 742 n.7 (Fed. Cir. 1985)	19
Diamond v. Chakrabarty, 447 U.S. 303 (1980), 447 U.S. 303, No. 79-136, quoting Deepsouth Packing Co. v. Laitram Corp., 406 U.S. 518, 530 -531 (1972)	1,29
Diamond v. Diehr, 450 U.S. 175 (1981), 450 U.S. 175, No. 79-1112, Dec. March 3, 1981	23
Donatelli v. National Hockey League, 893 F.2 459, 465 (1st Cir. 1990))].	25
Duncan v. Louisiana, 88 S.Ct.1444	27
E.I. du Pont de Nemours & Co. v.Berkley & Co.,620F.2d1247,1258 n.10,1260 n17,205 USPQ1,8n10,10n.17(8th Cir.1980)	10

Environtech Corp. v. Al George, Inc., 730 F.2d 753, 762, 221 USPQ 473, 480 (Fed. Cir. 1984)	11,19
Ex parte Gray [10 USPQ2d 1922, 1928 (Bd. Pat. App. & Inter. 1989)]	19
Ex parte Porter 25 USPQ2d 1144, 1147 (Bd. of Pat. App. & Inter. 1992)	20
Ex parte Forman, 230 USPQ 546, 547 (Bd. Pat. App. & Int. 1986)	20
Frontiero v. Richardson, 93 S.Ct. 1736, 411 U.S. 677	27
Gamez v. Toledo,	27
Gass v. Lopez, 95 S. Ct 729;	27
Gottschalk v. Benson [409 U.S. 63 (1972), 409 U.S. 63, No. 71-485]	23
Graham v. John Deere Co., 383 U.S. 1, 7 -10 (1966)	1,29
Griffin v. Breckenridge, 91 S Ct 179D	27
In re Alton [94-1495, S.N. 06/483,451]	18
In re Brana, 51 F.3d 1560, 1564 n.12, 34 USPQ2d 1436, 1439 n.12 (Fed. Cir. 1995)	18,20,23
In re Chilowsky, 229 F.2d 457, 462, 108 USPQ 321, 325 (CCPA 1956)	19,23
In re Eltgroth, 419 F.2d 918, 164 USPQ 221 (CCPA 1970)	23
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In re Fouche 439 F.2d 1237, 1243, 169 USPQ 429, 434, (CCPA 1971)	24
In re Gazave, 379 F.2d 973, 978, 154 USPQ 92, 96 (CCPA 1967)	19,23
In re Hogan, 559 F.2d 595, 605, 194 USPQ 527, 537 (CCPA 1977)	22
In re Irons 52 CCPA 938, 340 F.2d 974, 144 USPQ 351 (1965)	20
In re Jolles, 628 F.2d 1322, 206 USPQ 885 (CCPA 1980)	19,23
In re Marzocchi, 439 F.2d 220, 223; 169 USPQ 367, 369 (CCPA 1971)	20

In re Morris 127 F.3d 1048, 1053-56, 44 USPQ2d 1023, 1027-30 (Fed. Cir. 1997)]	15,17
In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992)	9,19,23
In re Prater 415 F.2d 1393, 162 USPQ 541 (CCPA 1969)	15
In re Swartz [00-1107, 00-1108]	15
In re Vaeck, 947 F.2d 488, 495, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991)	20
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In re Wertheim [541 F.2d at 263, 191 USPQ at 97]	19
In re Ziegler 992 F.2d 1197, 1200, 26 USPQ2d 1600, 1603 (Fed. Cir. 1993)	21
In re Zletz 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)	15
In re Zurko 142 F.3d 1447, 1449, 46 USPQ2d 1691, 1693 (Fed. Cir.), cert. granted, 119 S. Ct. 401 (1998)	19
Krantz and Croix v.Olin, 148 USPQ 659, 661-62 (CCPA 1966)	10
Leasco Data Processing Equip. Corp. v. Maxwell, 468 F.2d 1326 (2d Cir. 1972)	25
Lewis v.Bours, 119 Wn.2d 667, 670, 1992	20
Marbury v. Madison, 1 Cranch 137, 177 (1803)	27
Marino v.Hyatt Corporation, 793 F.2d 427, 430 (1st Cir. 1986)	20
Mayberry v. Penna., 91 S.8.	2
Morrill v.Tong, 390 Mass. 1207 129 (1983)	20
Newman v. Quigg, 877 F.2d 1575, 1581, 11 USPQ2d 1340, 1345 (Fed. Cir. 1989)	15
Niehot'f v. Sahagian, 103 A.2d 211 (Me. 1954)	24
Peckham v. Continental Casualty Ins. Co., 895 F.2d 830, 836 (1st Cir. 1990)	25
People v. Pierce, 66 Cal. 2d 53 (1967)	25
Pizarro v. Hotels Concorde Int'l, C.A., 907 F.2d 1256 (1st Cir. 1990)	24

Rannard v. Lockheed Aircraft Corp., 26 Cal. 2d 149 (1945)	24
Raytheon Company V.Roper Corporation, U.S.C.A., Federal Circuit, 1983, 724 F.2d 951, 220 USPQ 592	10,19
Sawtelle v. Farrell, 70 F.3d 1381, 1387 (1st Cir. 1995)	25
Standard Oil Co. (Indiana) v.Montedison, S.P.A., 664 F.2d 356, 375, 212 USPQ 327, 344 (3rd Cir. 1981), cert. denied, 456 U.S. 915, 102 S.Ct. 1769, 72 L.Ed.2d 174 (1982)	10
U. S. v. Price, 86 S. Ct. 1152, 1157	25,27
U.S. Rep, 404, 520-521 (1972)	30
United States v. Nixon, 418 U.S. 683 (1974)	25
Weiss v. Weiss, 436 N.Y.S. 2d. 862, 52 N.Y. 2d. 170 (1981)	27
Wood v. Strickland, 95 S Ct 992	27
Selected Published Peer-Reviewed Authorities	
Swartz, M., *Fusion Technology*, 22, 2, 296-300, 1992	
Swartz, M., *Fusion Technology*, 26, 4T, 74-77, 1994	
Swartz. M., Vol. 4. "*Proceedings: ICCF4*", sponsored by EPRI and the Office of Naval Research, 1994	
Swartz, M., *Fusion Technology*, 32, 126-130, 1997	
Swartz, M., *Journal of New Energy*, 1, 4, 26-33, 1997	
MIT RLE Progress Report, P. Hagelstein, M. Swartz, 139: 1, 1-13 (1997)	
Swartz, M, *Transactions of the American Nuclear Association*, Nashville, Tenn, 1998 Meeting, (ISSN:0003-018X publisher LaGrange, Ill) 78, 84-85, 1998	

OPINIONS BELOW

The opinion of the court of appeals [United States Court Of Appeals For The Federal Circuit ("CAFC")] appears at Appendix A to this Petition.

JURISDICTION

The jurisdiction of this Court is invoked under 35 U.S.C. §101 and 35 U.S.C. §112 and the United States Constitution [Article I, Section 8, Clause 8, Article III, Article IV, and the Fifth and Fourteenth Amendments], and Congress's demand for progress [*Diamond v. Chakrabarty*], ingenuity [447 U.S. 303, 309]] and important patentable statutory subject matter.

Venue of this judicial district is appropriate, including in view of 35 U.S.C. §145, §146, and §306.

The date on which the court of appeals decided Petitioner's case was 11/8/02 [Appendix A]. A timely petition for rehearing was submitted and denied by the court of appeals on 12/3/2002 [Appendix B].

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

This Petition involves a direct grant of authority made under the provision of Article I, §8, cl. 8 of the United States Constitution, which reads:

> **"Congress shall have Power (t)o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries".**

This Petition has authority because Congress has "encourage(d) progress" [*Diamond v. Chakrabarty*, 447 U.S. 303 (1980), 447 U.S. 303, No. 79-136, quoting *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 530 -531 (1972); *Graham v. John Deere Co.*, 383 U.S. 1, 7 -10 (1966)] and ingenuity [447 U.S. 303, 309], and has precisely defined patentable statutory subject matter to include

"anything under the sun that is made by man."

[S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H. R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952)].

This Petition has authority because in this case, the Office of Patents and Trademarks ("Office") has systematically ignored

unrebutted timely-submitted Declarations pertaining to issues of fact, has ignored its own rules, and has created an arbitrary standard of review for patentability under color of federal law [*Osborn v. Bank of United States*, 22 U.S. (9 Wheat) 738 (1824)].

This Petition has authority because given Art. I, §8, cl. 8 then there is more than the mere possibility that a question of federal law arises sufficient to satisfy the "arising under" jurisdictional authorization of Article III. Given this and that Congress has spoken, the United States Supreme Court should consider to exercise its supervisory power [*Marbury v. Madison*, 1 Cranch 137, 177 (1803)].

This court is the Petitioner's last and only source of relief. The court of appeals has decided an important federal question that conflicts with more than a dozen relevant decisions of the US Supreme Court and other courts of appeal, and has thus far departed from the accepted and usual course of judicial proceedings.

BASIS OF FEDERAL JURISDICTION IN THE COURT OF FIRST INSTANCE

Federal jurisdiction is authorized by Article I, §8, cl. 8, Article III, Article VI, the 5th and 14th Amendments, and 35 U.S.C. §145, §146, §306, §112 and §101.

In its Decision [hereinafter "Decision", Appendix C, Appeal No. 98-2593] regarding the above-entitled patent application [serial number No. 08-406,457; "the '457 application"; A148; claims A188], the Board of Patent Appeals and Interferences affirmed the rejections of the appealed claims 13, 14, 21, 22 and 24 through 39 under 35 U.S.C. §101 and 35 U.S.C. §112, first paragraph, and reversed the examiner's rejection of some of the appealed claims under Section 103 of the statute. The date of the Decision was 7/27/01. The Request for Reconsideration was denied on 12/11/01.

Petitioner thereafter filed a timely Notice of Appeal in the United States Court Of Appeals For The Federal Circuit [serial number No. 02-1240] and appealed the Decision constituting the rejection upheld by the Board of Patent Appeals and Interferences of all pending claims of the '457 application pursuant to 35 U.S.C. §112 and 35 U.S.C. §101. Petitioner, then Appellant, requested a hearing, but was denied. Four Amicus Curiae received permission to enter briefs from the

Appellees, then took the time to prepare their timely-submitted Briefs for the court. They were not entered, even on Motion, and even after Motion for Reconsideration.

On 11/8/022, the Court Of Appeals affirmed the Board's decision for putative lack of enablement under 35 U.S.C. §112, ¶1, and indefiniteness and putative lack of utility under 35 U.S.C. §101. The Appellant requested a rehearing, and it was denied on 12/3/02.

CONCISE STATEMENT OF MATERIAL FACTS

I

Fact 1 - '457 Teaches and Claims a Calorimeter and Method to Evaluation Specimens

Petitioner ["Applicant", "Inventor", "Appellant"], Mitchell Swartz, ScD, MD is a U.S. citizen and inventor who filed patent application S.N. 08-406,457 ("the '457 application") which is the subject matter of the above-entitled action. '457 teaches and claims invention of a novel calorimeter (heat-measuring instrument) and method used to examine and compare, heat-generating metal samples with full thermal controls. The invention measures the heat which the samples produce when electricity is driven through them [A183 in '457, A72 in Swartz (97), A178; A193-195, and A261-268]. The heat measured by '457 characterized what is called "activity" of the sample, which is defined as the ratio of the output heat power given off by the sample compared to the electrical input power delivered. Some of the heat is generated from the loading of hydrogen (a fuel) into palladium (a metal which absorbs hydrogen in the same way that a sponge fills with water).

'457 teaches a multiring calorimeter [Appendix G, A183, A72; also A178; and page OS17, lines 2-12]. '457 produces data characterizing the samples [Appendix H, A184, A76]. Outside the calorimeter, the heat given off by the samples is carefully monitored over time and compared with controls as taught in the original specification. Appendix H shows the output of the multiring calorimeter in '457. '457 complied and conformed with the Patent Act by teaching the subject matter defined by each of the rejected claims, and then set forth the best mode contemplated.

II

Fact 2 - The Claims Of '457 Have Operability

Independent Claim 13 (Appendix E, A188) claims the method of measuring the heat production of a sample "to determine the optimum electrical drive condition for said sample and thereby characterize said sample" for its optimum input electrical power (in watts) drive condition. Specifically, claim 13 claims "holding said sample" [OS page 17, lines 2-12], "loading ... said material" [OS page 16, lines 11-14, and in Swartz (1992; A92), Swartz (1993), Swartz (1994; A97)]. Claim 13 then claims "thermally monitoring" [OS page 18, line 3 through page 19, line 3, and also page 10, lines 14-18] and "deriving the thermal response of said sample by computational means including accounting for the mass and temperature distribution of at least one barrier between said rings" [OS page 22, lines 3-11 and line 18 through page 23, line 14, also page 23, lines 21 through page 24, line 6, and lines 14-17, and page 25, lines 4-11]. Claim 13 then claims "increasing through a series of at least three incremental steps the electric power drive conditions of said electrical circuit" followed by means for "deriving for each said step data consisting of the thermal output relationship of said sample as function of said drive steps, thereby deriving an optimum drive condition of said sample" [OS page 15, lines 15-20, and page 23, lines 14-17].

III

Fact 3 - Peer-Reviewed Papers Are Evidence

To support utility and operability of '457 and to demonstrate enablement, the inventor came forward with solid substantial, and timely, evidence of operativeness and utility proven by his peer-reviewed paper published by the American Nuclear Society [hereafter "Swartz(97)"; A71, Swartz, M., 1997, *Fusion Technology*, 31, 63-74; A71, also A83, A90]. The figures, graphs, and equations of Swartz(97) are is identical to what was taught in the original specification and claims on the date of the original filing. A preprint of the cited paper was included with the original specification.

Swartz(97) proves that the present invention was operable and correctly taught in the original specification and claims on the filing date of the application, and this is validation. Applicant submitted this sterling relevant reference eleven (11) times to the Office. All eleven (11) copies [A10-A13, Table

1 (A18)] were received by the Office and Board. The paper was submitted, then resubmitted repeatedly, in the expectation that it would be recorded and considered. In fact, peer-reviewed Swartz(97) was specifically discussed with the Examiner, and discussed in the Appeal Brief to the Board on page 40, in the Reply Brief including on page 6-7, 9-10, 19, 24-25, and in the Second Reply Brief including on pages 3-4.

Egregiously, despite being submitted and received, Swartz(97) was ignored and systematically removed from the file [A197,A240,A323-325,A327-A330,A339]. To this day, Swartz(97) is not listed on the Office's first Docket (A3) nor on the Office's revised "second Docket" (A6), nor is it even listed –let alone substantively addressed– in the Decision which began this Appeal (Appendix C). ****-1

IV

Fact 4 - Declarations Are Evidence

Supporting utility and operability of '457 and demonstrating enablement, the inventor submitted several

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**** - 1 Eleven copies of Swartz(97) [Fusion Technology, 31, 63-74, 1997; A71], demonstrating enablement existed at the time of the original filing, were submitted. On 3/12/97 a second copy was submitted and discussed it in the Response to the Examiner [pages 50 and 51]. Thereafter, Applicant was informed by Examiner Daniel Wasil that said published paper was "missing" and had been removed from the file folder. On 5/26/97, Applicant replaced the paper with a third copy, and discussed it in the Response to the Examiner [pages 2 and 3]. After it was ignored, on 11/8/97, Appellant sent additional copies to the Board (in triplicate) and discussed it in the Appeal Brief [pages 47, 57]. After it was ignored, on 6/25/98, Applicant sent the eighth, ninth, and tenth copies of the published paper to the Board, bound to each copy of the Reply Brief. Receipt of Swartz(97) is documented at least five (5) ways.
First, on the original specification, the preprint is listed.
Second, there are the numerous datestamps of the Patent Office [A10-A13, summarized in Table 1(A18)].
Third, Swartz(97) was listed on Forms 1440 (A14,A10-A13).
Fourth, Swartz(97) was discussed in the Response to the Examiner [pages 50 and 51] of the 3/12/97 Response, and pages 2 and 3 in the 5/26/97 Response, and in the Appeal Brief [pages 47 and 57].
Fifth, the Board admitted it received material "attached to Declaration of Dr. Mitchell Swartz Supporting Appeal Brief." (Paper No. 25)" [on page 21 of said Decision] and said Declaration was physically bound to Swartz(97).

Declarations [A52,A55,A56,A58,A61, A28,A32,A36,A38,A44, A47,A49,A50)] which delivered substantive arguments to the Examiner's rejections. The Declarations were received [A10-A13, A18]. The Declarations contained factual statements with particularity directly addressing how the specification adequately described the subject matter recited in Claim 13, and demonstrating that it operated as stated and that a person of ordinary skill in the art would have understood the inventor to have been in possession of the claimed invention at the time of filing.

The Declarants substantially and fully addressed all matters and issues criticized by the Office and explicitly rebutted each and every issue with solid substantive evidence. The Declarations have proven that an adequately written description requirement is met because they demonstrate that the present invention works as taught in the original specification and claims, and thus contain averments regarding evidence establishing the utility, validation, and operability of the Applicant's claimed subject matter. Some of the Declarants rebutted what the Office falsely and egregiously claimed they said. Other Declarants state that the '457 has utility and that the Office's cited art has nothing to do with the Applicant's precise invention.

Discussion of the Declarations was made in the Appeal Brief and Reply Brief to the Board [Appeal Brief pages 40-43, Reply Brief pages 14, 15, 25-26, Second Reply page 3] and in other responses to the Examiner [A198, A248-A249,256, 285-286,298, A319-320, A329, A334-335, A342-343, A358-360, A380-385]. **** - 2

There has been a lack of due process. The Declarations remain substantively ignored with respect to their factual

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**** - 2 The datestamp of the Office demonstrates said Declarations were received [A10-A13,A18]. Each Declaration was accompanied by statements supporting their introduction including full and explicit showing of good cause and sufficient reasons why they were not presented earlier. Said unrebutted Declarations include the Swartz Declaration (A28, 9/16/97, Fox declaration (A44, 5/16/95; Mallove Declaration (A38, 2/6/94; Verner Declaration (A36, 9/16/97), Rotegard Declaration (A47, 5/15/94), Bass Declaration (A32, 4/17/96) and testimony from Drs. Melvin Miles (A49), Brian Ahern (A50) and Ray Kurzweil (A51).

engineering content regarding operability and utility because they accurately and absolutely refute the Decision's erroneous statements and position. This has continued in the face of Orders to address them and the Briefs which did refer to them [Appendix D]. In this light, it cannot be determined from the record which - if any - of these submitted substantive averments by the Declarants were formally considered in the writing of the Decision.

V

Fact 5 - The Office's Own Witnesses Provide Impeccible Evidence

The Office's own witness, inaccurately cited by the Office, Dr. Michael Schaffer (A55, 8/7/01) said,

> **"I do not see how anyone could construe anything that I wrote at Scientific American's site to imply that there is "no utility" in cold fusion, much less in instruments that might be used in cold fusion and other scientific experiments. ... It appears that the Board of Patent Appeals considers me an expert on this subject. As an expert ... I would agree [Dr. Swartz's invention] ... does have utility".**

The Office's own witness, Jed Rothwell (A61), inaccurately cited by the Office, said,

> **"None of my statements referred to the functionality, operability or performance of Dr. Swartz's multiring calorimeter. Nothing I have published or heard from scientists casts doubt on the claimed capabilities of Dr. Swartz's invention. ... I interviewed many people and some scientists, such as Dr. Michael McKubre, were enthusiastic about Dr. Swartz's device. Therefore I stated that it may well be a "superb research tool" in the article quoted."**

The Office's own witness, Dr. Rehn, US Navy, inaccurately cited by the Office, said,

> **"Perhaps the clearest scientific fact, at this time, is the hardest for physicists to accept: nuclear reactions apparently do occur in deuterium-loaded Pd, Ti, and probably in other solids."**
>
> [Office of Naval Research, NAVSO P-3580, 18, 1/93].

The Office's own witness, Dr. Will, inaccurately cited by the Office, said,

> **"Significant positive results have been obtained (by) 100 groups from more than 12 countries"**
> [Final Report NCFI (1991)].

VI

Fact 6 - Petitioner's Declarants Provide Additional Evidence

Dr. Scott Chubb (A52, 8/13/2001) said,

> **"Dr. Swartz has invented an important, new device, whose purpose has value for measuring activity of a sample."**

Dr. Eugene F. Mallove said (A58, 8/13/2001),

> **"The activity of a sample is an important issue and its measurement has great utility... The invention does not require the reproducibility of cold fusion phenomena... Rothwell actually praises ('45' stating) 'This could be a superb research tool...'".**

Dr. Hal Fox (A56,8/13/2001) said,

> **"... the method of measuring the activity ot sample in the above-entitled action is clever, not obvious, and is an important invention with utility."**

Dr. Michael McKubre [in the article cited by the Office, *Infinite Energy*, 4, 20, 34-35, (98)] said,

> **"For me ... perhaps the best report at this conference, was that of Mitch Swartz."**

VII

Fact 7 - Petitioner's Submitted Exhibits Are Evidence

Petitioner submitted Exhibits which substantively dispute the Office and discussed them with the Office and in the Appeal Brief [pages 45, 55-59], Reply Brief [pages 3-6, 12-13, 15-16, 18-20], and Second Reply Brief [pages 1-6]. The Exhibits included hundreds of peer-reviewed published papers [Table 2 (A19)] including Swartz(92), Swartz(94) and Swartz(99) [A92,A90,A83], Mallove pp246-248, Storms(90,93); Arata(90); Celani(90); Pons(90); Bockris(90); Szpak(91B); McKubre(91); Chene(90); Rout(91); Notoya(93, 94A,94B); Will(91,93,94);

Bush(91), Miles(94C,91,93B,94C); Mizuno(94); and McKubre, SRI, "Summary During ICCF-7", *Infinite Energy*, 4, 20, pp.34-35, (1998)]. However, like Swartz(97) and the submitted unrebutted Declarations (A52,A55,A56,A58,A61, A28,A32,A36,A38,A44, A47,A49,A50), theses Exhibits –also supplied in the expectation that they would be read and substantively considered– were (in violation of federal regulations and normal custom) not even recorded on the Docket sheet. When the Examiner informed the Petitioner that they were removed from the file folder, the Petitioner re-sent them, and then again re-sent some of them [including Swartz(97)] eleven times.

The standards of review require that the Decision be based upon the invention which measures heat release and the activity of a sample. Instead this Decision commits clear error when it purports that the invention did not have utility or validation based on its sole reference to other art. Here, the Office ignored the evidence, ignored the invention, and "hand waved" away from '457, instead pointing to 'cold fusion' as if it were a forbidden word. It is merely, one of several scientific and research environments in which the present invention finds utility.

Only by such improper action as systematically ignoring evidence can the Office and Board purport that this invention has no utility. As *amicus curiae* Fox stated,

> **"... (A)lthough an estimated 300 patent applications have been sent to the U.S. Office of Patents and Trademarks by inventors of new cold fusion devices and systems, no patents have issued citing the prior art. ... Inventors in other countries have been successful in obtaining patent protection by the governments. Over 100 low-energy nuclear reactions patents have issued in Japan and many more in various European countries ..."**

REASONS FOR GRANTING THE WRIT

I

Briefly, the gravamen of this case is that the Office has (and thereafter the Board have) not properly followed customary standards of review and not complied with the authority of Article I, Section 8, Clause 8 and its enablement through Congressional directive and statute. A Decision arising under

Article I, Section 8, Clause 8 should be accurate, and it should be consistent with the record, and rendered with full and just consideration of submitted Exhibits and Declarations, but this one does not. This Decision does not read on the original specification and claims.

The writ should be granted because if the Decision must rely upon reference to art cut of a cloth other than the above-entitled specification and claims, then the Office's case must indeed be rather weak and that alone should dictate allowance of the present invention.

II

The Amicus Curiae were silenced both by denial of a Hearing and thereafter by the court's failure to docket their four (4) laboriously-prepared and timely-submitted Amicus Curiae Briefs **even though their input was acceptable to the Appellees (here Respondents)**. The writ should be granted because instead of fairness, the Decision substantively ignored the unrebutted Declarants, skilled-in-the-art, who have disputed the Office and attest to conformation with 35 U.S.C. §101. The Declarations demonstrate that the original specification and claims clearly define subject matter of considerable utility, and that therefore, the Applicant has fully conformed with, and satisfied, the requirements of §101 of the Patent Act and met at least one (1) stated objective [*Standard Oil Co. (Indiana) v. Montedison, S.P.A.*, 664 F.2d 356, 375, 212 USPQ 327, 344 (3rd Cir. 1981), cert. denied, 456 U.S. 915, 102 S.Ct. 1769, 72 L.Ed.2d 174 (1982); *E.I. du Pont de Nemours & Co. v.Berkley & Co.*,620F.2d1247,1258 n.10,1260 n17,205 USPQ1,8n10,10n.17(8th Cir.1980); *Krantz and Croix v.Olin*, 148 USPQ 659, 661-62 (CCPA 1966); *Chisum on Patents*, 4.04[4] [1983]; *Raytheon Company v. Roper Corporation, U.S.C.A.*, Federal Circuit, 1983, 724 F.2d 951, 220 USPQ 592].

III

The writ should be granted because the Decision substantively ignored Swartz (97) which demonstrates enablement at the time of the initial filing despite that validation only comes through peer-review. Eleven (11) date stamps of the Patent Office are impeccable and undeniable evidence which demonstrates submission and receipt of Petitioner's peer-reviewed publication. It proves utility and

enablement as of the filing date of this application, such that one of skill in the art could conduct this patent without undue experimentation (A136).

IV

The writ should be granted because the Decision ignores the standards of review and ignored violations of the Office's own rules and the authority of the U.S. Constitution.

The normal standard of review requires the Office address the invention as it was actually taught in the original specification and claims, but here the Office did not.

The normal standard of review requires discussion of the submitted (but not docketed by the Office) Declarations because they prove utility and enablement.

The normal standard of review requires the Office substantively address Swartz(97) after it was discussed in the Appeal Brief on page 40 [also pages 20-24, and 29-39], and in the Reply Brief on page 6-7, 9-10, 19, 24-25.

The normal standard of review requires the Office to provide reason to doubt the objective truth of any of the Declarants' statements [*Environtech Corp. v. Al George, Inc.*, 730 F.2d 753, 762, 221 USPQ 473, 480 (Fed. Cir. 1984)]. It has not. It just ignores them and makes no mention of exactly why relevant evidence has not been substantively addressed.

The normal standard of review requires the Office not repeat disingenuous misstatements

The normal standard of review requires the Office to address the Office's misstatements which are directly contradicted by evidence already in the record.

The normal standard of review requires the Office admit that there is absolute impeccable and indelible evidence of the Office's own date-stamp (eleven times, and documented in the record) showing that the Office received the relevant Exhibits.

The writ should be granted because the Office inaccurately stated without evidence that the present invention has a putative lack of operability and utility under 35 U.S.C. §112, ¶1 and §101, even in the face of the USA at War and the unrebutted skilled-in-the-art Declarant and timely-submitted Exhibits. If the Office must rely upon reference to art cut of a cloth not even made from the original specifications and claims, and must systematically ignore unrebutted duly-submitted Declarations and Exhibits, then the Office's

position is weak – which should dictate allowance of the present invention.

V

The writ should be granted because the original specification and claims complied and conformed with the Patent Act and taught the subject matter defined by each of the rejected claims, set forth the best mode contemplated, and distinctly point out and claim the subject matter which constitutes the invention. This is forever corroborated by unrebutted Declarations, ignored *amicus curiae* Briefs, and published peer-reviewed paper timely submitted with evidence including the impeccable date stamp of the Office.

The writ should be granted because enablement and validation of the present invention are an issue of fact, supported by unrebutted Declarants, unrebutted Exhibits, and Swartz(97). Said enablement and operability of the invention are grounds supporting patentability.

QUESTIONS PRESENTED

Did the Decision Misread the Claims of the Present Application Under 35 U.S.C. §101 and 35 U.S.C. §112?

I

Deviating from the normal standards of review, the Decision has misread the claims of '457 far from that fact that it is a novel calorimeter (i.e., a heat-measuring instrument) [A183 in '457, A72 in Swartz(97), A178; also A193-195, and A261-268] and a "**method to ... characterize (a) sample**". Petitioner discussed this invention, pursuant to 35 U.S.C. §112,] in the Appeal Brief [APB 30-60] and Reply Brief [pages 2-10, 12-13]. And yet, even though the present invention's subject matter regarding measurement of heat activity, and of characterization of samples was discussed. NONE of the words which encompass the invention and the claims are mentioned in the Decision. Instead, the Decision of the Board inaccurately substitutes the words "cold fusion" repeatedly for the words "heat production", and for the word "activity", and for the words "electric power drive", and for "thermally monitoring", "thermal output", "optimum drive condition", and even for "multiring calorimeter". Documenting this forever, the Decision refers to "cold fusion" eighty-six (86) times, but the above words not at all. Further rubber-stamping the Office's error, and denying justice and

the American way, the Decision of the Appellate Court uses the words "cold fusion" 14 times, but "calorimeter" not even once **** - 3.

II

An invention (in its structure, operation and composition) is defined by the claims and the original specification. However, this Decision has failed to correctly describe the invention and then is about art cut of cloth made of other than the present invention and claims. This Decision does not accurately discuss the present invention. Only two sentences in the entire Decision accurately discuss the present invention, and they are direct quotes from the original specification.

The misreading of claims and subject matter is the Office's segue to cite totally irrelevant art ("FP" for Drs. Fleischmann and Pons) which then constitutes the entire Decision which then ignores the present invention as it lectures on the work, activities, and mistakes, of others, specifically Dr. Fleischmann and Pons (FP) from 1989 – and not the original specification and claims of the above-entitled invention [Appendices E,G,H]. Thus, the Decision leads away from the present invention. Corroborating this, the Decision did not rebut the Declarations, or the Exhibits, or Swartz(97), but only refers to other irrelevant immaterial art. As a result, **none of the Decision of Board (28 pages) pertains to the present invention** but rather to the Office's now fourteen (14) year long attack on cold fusion and those poor American citizens who have dared to research and develop it as an alternative energy source for America. It is only by the Office calling the present invention "cold fusion" instead of a novel multiring

**** - 3 The Decision did not discuss claim 13. It is a fact that the invention measures the HEAT GENERATION from a sample, as discussed in the original specification and claims. The Decision discusses it zero (0) times. Similarly, each of the key features of claim 13 are absolutely and totally ignored in the Decision.
Claim 13 teaches and claims "thermally monitoring", but the Decision discusses "thermally monitoring" zero (0) times.
Claim 13 teaches and claims "electric power drive", but the Decision discusses "electric power drive" zero (0) times.
Claim 13 teaches and claims "thermal output", but the Decision discusses "thermal output" zero (0) times.
Claim 13 teaches and claims "optimum drive condition", but the Decision discusses that zero (0) times.
Claim 13 teaches and claims "multiring calorimeter", but the Decision discusses that, zero (0) times.

calorimeter and method to measure heat producing activity, that the Office can get away with its patent nonsense such as claiming that heat measurement is an "unattainable result" when Appendix H herein from the record below heralds otherwise.

III

Such malicious "boilerplate" attack by the Patent Office on the words "cold fusion" is well-known and is contrary to the commonsense interests of United States security. As the *amicus curiae* Eugene F. Mallove, Sc.D has stated,

> **"The most notable characteristic of the attack against the Swartz patent application at hand is its stale fixation with misrepresented events of 1989, its citation of erroneous reports, and its continued argument from supposed authority, rather than from evolved science and meticulous experiment."**

The Decisions' continual referral to "cold fusion" rather than '457 is systematic prejudice because the present invention is not "cold fusion", but rather, '457 is a means to evaluate, to measure, a sample's heat-producing activity. It could detect cold fusion, and it could characterize samples used for cold fusion. It also makes better home water heaters, and safer more efficient energy systems. It is more than unfortunate that with U.S. at War, the Office continues to be fixated on using disingenuity, systematic false statements, and reliance upon fraud. ****-4

LAW

Point 1 - The Office is Inaccurate and Disingenuous about the Subject Matter

Because of its errors, and its basis upon disingenuous notions, the Decision is necessarily inconsistent with several

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**** - 4 The present invention, '457, has been used to measure data for MIT and has already been escribed in publications by the *American Nuclear Society*. Their work is impeccible and does not explain why with the USA at War, the Office continues to be disingenuous and discriminate and violate the US Constitution and Congressional directive, just so that a few under color of law can further deny the USA access to an available alternative energy source. It is reprehensible that in this case, the Office ignores input to from scientists, and from those who serve the military, NASA and and other agencies. It is reprehensible that in this case, the Office coverup continues in the federal system without accountability.

standards of review and case law. The Office has acted very unfairly to avoid the controlling authority of the Constitution.

The Decision rejects the reasoning of *In re Morris* [127 F.3d 1048, 1053-56, 44 USPQ2d 1023, 1027-30 (Fed. Cir. 1997)] demanding that the interpretation of operability and utility is predicated upon that which one who is skilled-in-the-art would reach. The Office should have given the claims their broadest reasonable interpretation consistent with that which those skilled-in-the-art – i.e.. Declarants and silenced *amicus curiae* – would reach.

The Decision rejects the reasoning of *In re Prater* [415 F.2d 1393, 162 USPQ 541 (CCPA 1969)] because the pending claims must be given the broadest reasonable interpretation consistent with the specification.

The Decision rejects the reasoning of *In re Zletz* [893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)] because the specification clearly and explicitly stated the meaning of the terms in the claims which involve an invention used to measure heat-producing ability, or activity, of a sample.

The Decision rejects the reasoning of *In re Prater* [415 F.2d 1393, 162 USPQ 541 (CCPA 1969)] because the Decision relies solely on art cut of a cloth other than the present specification and claims. The Decision rejects the reasoning of *In re Ferens* [417 F.2d 1072, 1074, 163 USPQ 609, 611 (CCPA 1969)] and *In re Oberwener* [115 F.2d 826, 829, 47 USPQ 455, 458 (CCPA 1940)] because the Office falsely purports that the invention is "cold fusion" rather than a method to measure the heat generating activity of a sample.

The Decision rejects the reasoning of *Newman v. Quigg* [877 F.2d 1575, 1581, 11 USPQ2d 1340, 1345 (Fed. Cir. 1989)] because the Office derides the present invention with reference to cold fusion but, in fact, measurement of heat generation of a sample has absolutely nothing to do with perpetual motion but has been shown to work [Appendix H].

The Decision rejects the reasoning of *In re Swartz* because there are other uses for the present invention than just "cold fusion". '457 is applicable to calorimetric science, water

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heating, laboratory testing, electronic engineering, and other fields. In this case, the inventor mentioned many uses including the measurement of activity of a sample (Original Specification, page 7) and the sorting of samples for the amount of heat which they give off or absorb. Thus, the present invention is useful for determining the efficiency of present water heaters as discussed and demonstrated in the original specification. This diversity of use is consistent with the directive of the appellate court [00-1107 and 00-1108] where, not coincidentally but maliciously, two other inventions were also labeled "cold fusion" by the Office. ***-5

Whether The Office Failed The Standards Of Review By Ignoring Testimony Of Declarants Skilled-In-The-Art Under 35 U.S.C. §112 And 35 U.S.C. §101.

I

Despite the normal standards of review, the Office [and Decision] did err in failing to give substantial weight to unrebutted Declarants of probative value who are skilled-in-the-art (****-6) and whose testimony did rebut and refute the Office's [and Decision's] unsupported disingenuous statements and erroneous conclusion. The Declarants, corroborated by the *amici curiae*, prove that Petitioner taught material that was understood by persons with normal engineering skill. They prove that as of the filing date, scientists skilled-in-the-art considered loading, and heat

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**** - 5 It is against the US Constitution that the Patent Office routinely attacks Petitioner's {and others'] research using misstatements and deceptive obfuscatory boilerplate argument, as in the above-entitled record below. As palpable examples to this court, attention is direct to the fact that in this court [00-1191, from In re Swartz 00-1107] the Office falsely called that invention, for measuring the loading of the hydrogen into a metal sample using a vibration of that sample [A345-347,A357], "cold fusion", too, so as to demean it. Similarly, the Office, in this Court [00-1191, In re Swartz 00-1108], falsely called that invention using a two-step system to drive hydrogen diffusion in metals [A372-373,A387-388], "cold fusion", too, to demean it.

**** - 6 The Declarants, authorities in their fields, include some of the Office's witnesses who now directly refute and contradict the Office [Dr. Rehn, Dr Will, Dr. Schaffer (A55), and Rothwell (A61)].

measurement to be real and to have been taught correctly in the original specification and claims. The unrebutted Declarations were received by the Office (A10-A13,A18), cited in the inventor's pleadings and then in the Appeal Brief [pp.33-34] and Reply Brief [pages 3-6, 12-13,15-16,18-20].

II

The submitted unrebutted Declarations were ignored regarding their probative content -even in the light of Orders to address them and their accompanying Briefs [Appendix D]. The Declarants comments have been improperly relegated to "opinion"-status without an adequate explanation of how the declarations failed to overcome the *prima facie* case initially established by the Board but copiously overcome by Petitioner. None of their most important relevant substantive paragraphs are referred to in the Decision. Even the Declarations saying that the Affiants had been misquoted by the Office have been ignored. Thus, the Decision erred in omitting exactly why the unrebutted Declarants have not been addressed, which - if any - of these submitted unrebutted documents regarding operability and utility have been formally considered by the Board and, if so, how they reached their conclusion given the evidence supporting the Petitioner.

LAW

Point 2 - Witnesses, Even Those Cited by the Office, Dispute the Office

Because the Office has ignored Declarants and submitted Exhibits, the Decision is necessarily inconsistent with several standards of review and case law.

The Office has rejected the directive of 1.131 (a)(1) which states that "**When ... a patent ... is rejected .... on reference ... to a printed publication, the inventor of the subject matter of the rejected claim ... may submit an appropriate oath or declaration to overcome the patent or publication.**" Therefore, the unrebutted Declarations (and other evidence) are allowable.

The Decision rejects the reasoning of *In re Morris* [127 F.3d 1048, 1053-56, 44 USPQ2d 1023, 1027-30 (Fed. Cir. 1997)] because the interpretation of operability, utility, and enablement is predicated must be consistent with that which

one who is skilled-in-the-art would reach. [*In re Morris* ("[T]he PTO applies to the verbiage of the proposed claims the broadest USPQ2d 1566, 1567 (Fed. Cir. 1990) (**"It is axiomatic that, in proceedings before the PTO, claims in an application are to be given their broadest reasonable interpretation consistent with the specification, ... and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.**") (emphasis added); see also M.P.E.P. §2111.01.

The Decision rejects the reasoning of *In re Alton* [94-1495, S.N. 06/483,451] because the Board has mistaken a question of fact for a question of law. The Board has ignored the Declarations purporting that they are "opinion". This is wrong and improper. Dr. Mallove's, or the other Declarants', use of the words "it is my opinion" to preface what someone of ordinary skill-in-the-art would have known does not transform the factual statements contained in the declaration into opinion testimony. The Board erred by dismissing declarations improperly to "opinion"-status, without an adequate explanation of how the declarations failed to overcome the *prima facie* case initially established by the Board and refuted by the evidence including the Declarations and Swartz(97).

How many Declarants does it take to overcome the Office's unsubstantiated rejection?

Applicant discussed the Declarations in his Responses to the Examiner and to the Board [A198, A248-A249,256, 285-286,298, A319-320, A329, A334-335, A342-343, A358-360, A380-385]. Consequently, the Board's dismissal of any of the unrebutted Declarations (A52,A55, A56,A58,A61, A28,A32, A36,A38, A44,A47, A49,A50) on the grounds that they are "opinion" is an error of law. The Declarations contain factual evidence and the Board is obligated by law to assume that said Declarants' unrebutted assertions are true [*Lewis v.Bours*].

The Decision rejects the reasoning of *In re Brana*, 51 F.3d 1560, 1564 n.12, 34 USPQ2d 1436, 1439 n.12 (Fed. Cir. 1995)] because the Office has never given reason for doubting the objective truth of the Declarants' statements. This is relevant

because the Declarants support the present claimed invention [*Environtech Corp. v.Al George, Inc.*, 730 F.2d 753, 762, 221 USPQ 473, 480 (Fed. Cir. 1984)].

The Decision rejects the reasoning of *In re Zurko* [142 F.3d 1447, 1449, 46 USPQ2d 1691, 1693 (Fed. Cir.), cert. granted, 119 S. Ct. 401 (1998)] because utility is a fact question [*Raytheon Company v. Roper Corporation*, U.S.C.A., Federal Circuit, 1983, 724 F.2d 951, 220 USPQ 592], and one which the Court must review for clear error [*Cross v.Iizuka*, 753 F.2d 1040, 1044 n.7, 224 USPQ 739, 742 n.7 (Fed. Cir. 1985)].

The Decision rejects the reasoning of *Ex parte Gray* [10 USPQ2d 1922, 1928 (Bd. Pat. App. & Inter. 1989)] because there is solid evidence of operability and utility, beyond the detailed specification, in the form of corroboratory unrebutted expert testimony of Declarants and *amicus curiae* which fully addressed all matters criticized by the Office regarding operability, substantially and extensively [*In re Gazave; In re Chilowsky; In Re Jolles*]. Nothing has been presented by the Office which differs or rebuts the Declarations.

The Decision rejects the reasoning of *In re Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444] because the Office **"bears the initial burden ... of presenting a *prima facie* case of unpatentability"**. Thereafter, the Petitioner undertook the full burden coming forward (A10-A13,A18). with his evidence and Declarations (A52,A55,A56,A58,A61, A28,A32,A36, A38,A44,A47, A49,A50) as required. Swartz(97) and the Declarations have not been rebutted or even substantively addressed by the Office despite that the Office's burden is only discharged by the Office by **"presenting evidence or reasons why persons skilled-in-the-art would not recognize in the disclosure a description of the invention defined by the claims"** [*Wertheim*, 541 F.2d at 263, 191 USPQ at 97]. That was NOT done in this case, either by the Office or the Board. Thus, the Board made an improper rejection on the ground that the application purportedly failed to describe an invention of utility and operability relating to the independent claims, even as it ignored Declarations containing relevant fact by probative witnesses (A52,A55,A56,A58,A61, A28,A32,A36, A38,A44,A47, A49,A50). The Decision should have responded to the unrebutted Declaration, but did not.

The Decision rejects the reasoning of *Ex parte Porter* because the Decision is inconsistent with said unrebutted Declarations, written by those skilled-in-the-art and timely submitted by Petitioner in response to the Office's inaccurate and disingenuous comments.

The Decision rejects the reasoning of the Appeals Court [*Marino v.Hyatt Corporation*, 793 F.2d 427, 430 (1st Cir. 1986)]; *Morrill v.Tong*, 390 Mass. 1207 129 (1983); *Chelebda v.H.E. Fortuna & Brothers Inch* 609 F.2d 1022 (1st Cir. 1979)] because the Office failed to assume that Declarants' unrebutted assertions --**made before the Appeal and in response to false statements made by the Office**-- are true [*Lewis v. Bours*, 119 Wn.2d 667, 670, 1992].

The Decision rejects the reasoning of *In re Irons* [52 CCPA 938, 340 F.2d 974, 144 USPQ 351 (1965)] because the Office's Witnesses, and other Declarants, and the *amicus curiae*, dispute the Office in timely-submitted Declarations.

The Decision rejects the reasoning of *In re Marzocchi*, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971)] because the Board cannot make this type of rejection, unless it has reason to doubt the objective truth of the statements contained in the written description [*In re Brana*, 51 F.3d at 1566, 34 USPQ2d at 1441 ("**Only after the PTO provides evidence showing that one of ordinary skill in the art would reasonably doubt the asserted utility does the burden shift to the applicant to provide rebuttal evidence sufficient to convince such a person of the invention's asserted utility**"); *In re Marzocchi*) ("**[A] specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as in compliance with the enabling requirement of the first paragraph of §112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support.**").

The Decision rejects the reasoning of *In re Ziegler* [992 F.2d 1197, 1200, 26 USPQ2d 1600, 1603 (Fed. Cir. 1993)] because

Declarations factually confirm proof of utility. The Office has ignored Rotegard(A47), Swartz(A28), Bass(A32), Fox(A44 and A56), Mallove(A38 and A58), Chubb (A52), Verner (A36), Kurzweil(A51), Rothwell (A61), Ahern(A50), Schaffer (A55), and Miles(A49) which individually prove that the present claimed invention which measures heat-generating activity meets at least one stated objective and therefore defines subject matter of considerable utility under §101 of the Patent Act.

Whether The Office Failed The Standards Of Review By Ignoring Evidence Including *Fusion Technology* '97 Under 35 U.S.C. §112 And 35 U.S.C. §101.

I

Petitioner (then Applicant) supplied Exhibits to the Office as evidence consisting of over 300 papers (~140 pounds; Table 2; A19), including over 30 of his own peer-reviewed papers (several published by the American Nuclear Society in *Fusion Technology*, A92, A90, A83) and including Swartz. M., 1997, *Fusion Technology*, 31, 63-74, which proved that Petitioner was correct, and the invention was correctly taught in the original specification and claims on the filing date of the application. Also, several Exhibits included reports by US laboratories, US NAVY, EPRI, DARPA, and NASA, submitted in response to the Office's unsubstantiated notions. Many Exhibits were published before the present original specification and claims and demonstrate that the Office's notions were wrong, and are salient proof of operability and utility.

Petitioner submitted this evidence because "**(p)atentability is determined on the totality of the record, by a preponderance of the evidence with due consideration to persuasiveness of argument.**" [Id. at 1445, 24 USPQ2d at 1444]. Petitioner showed good cause and clearly specified the reasons why the Exhibits were not submitted before, namely they were not necessary prior to the misstatements by the Office. Said Exhibits exceed by any test the amount of evidence required for proof of utility. The Office should have responded to them, and if not, admit that the Applicant has submitted and demonstrated substantial solid evidence (A19) supporting the present application at the time it was filed. The Office was Ordered to substantively respond (A145) but has not.

LAW

The Decision rejects the reasoning of *In re Hogan* [559 F.2d 595, 605, 194 USPQ 527, 537 (CCPA 1977)] because enablement must be judged on the original specification and claims. Swartz. M., 1997, *Fusion Technology*, 31, 63-74 proved that Petitioner was correct, and the invention was correctly taught in the original specification and claims on the filing date of the application.

Point 3 - Peer-Reviewed Publications Were Timely Submitted Proving Patentability

The Decision rejects the reasoning of *In re Wands* [858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)] because this original specification provides an adequately written description of the subject matter, including how to operate the invention, and claimed the invention so that an artisan, or those skilled-in-the-art, could practice it without undue experimentation [*In re Wands*. citing with approval *Ex parte Forman*, 230 USPQ 546, 547 (Bd. Pat. App. & Int. 1986)]. Sufficient would be either the Declarations or the published peer-reviewed paper which de nonstrate that the specification provides an adequately written description of the subject matter, including how to operate the invention, and claimed the invention so that an artisan, or those skilled-in-the-art, could practice it without undue experimentation.

Together, the Declarations and published peer-reviewed paper corroborate enablement of the present invention both *de facto* and *de jure*.

The Decision rejects the reasoning of *In re Vaeck* [947 F.2d 488, 495-96, 10 USPQ2d 1438, 1444 (Fed. Cir. 1991)] because an enablement rejection under section 112,¶1 is only appropriate where the written description fails to teach those in the art to make and use the invention as broadly as it is claimed without undue experimentation. The Decision has not met the burden of proof as to why one of ordinary skill-in-the-art would not consider the description sufficient given the Exhibits. Here there was the published identical peer reviewed publication conveniently ignored despite it being submitted eleven times.

The Decision rejects the reasoning of *In re Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444] because it ignores the relevant

peer-reviewed Exhibits including Swartz(97) [A71] demonstrating operability and utility [therefore enablement]. *In re Oetiker* requires the Board (and Office) to substantively and fully respond to the probative witnesses (A52,A55,A56,A58,A61, A28,A32,A36, A38,A44,A47, A49,A50), because Applicant undertook the full burden coming forward (A10-A13,A18). The Decision should have responded to the unrebutted Declaration, but did not.

The Decision rejects the reasoning of *In re Brana* and *In re Eltgroth*, 419 F.2d 918, 164 USPQ 221 (CCPA 1970)] because it relies solely on other art and claims than those involving the present application. The PTO may establish a reason to doubt an invention's asserted utility only when the written description **"suggest[s] an inherently unbelievable undertaking or involve[s] implausible scientific principles"**.

The Decision rejects the reasoning of *In re Gazave*, 54 CCPA 1524, 379 F.2d 973, 154 USPQ 92 (1967)], *In re Chilowsky* [43 CCPA 775, 229 F.2d 457, 108 USPQ 321 (1956)], and *In Re Jolles* because there was significant evidence submitted as copious unrebutted Exhibits by Applicant regarding utility.

This heat-activity-measuring method to select active materials should be patentable based upon opinions of this Court.

> **"Transformation and reduction of an article "to a different state or thing" is the clue to the patentability of a process claim that does not include particular machines."**
>
> [*Gottschalk v. Benson*, 409 U.S. 63 (1972), 409 U.S. 63, No. 71-485]

> **"Industrial processes such as this ["a physical and chemical process (which involves) the transformation of an article .... into a different state or thing"] are the types which have historically been eligible to receive the protection of our patent laws. [450 U.S. 175, 185]"**
>
> [*Diamond v. Diehr*, 450 U.S. 175 (1981)]

Whether The Office Failed The Standards Of Review And 18 U.S.C. §1001 By Making False Statements Or Writings Of Temperature And Voltage.

The Decision has material false statements undeniably contradicted by the original specification and by the record (Appendix F; also Table 3; A147). As just one example, the Decision falsely states "*there is no disclosure . . . of a specific operative embodiment . . .including ... temperature*" [pages 25,26]. However, this is untruthful because temperature is discussed in the original specification on page 18, line 3 through page 19, line 3. Temperature calculations are discussed on page 22, line 18 through page 23, lines 14, and page 15, lines 15-20.

As another example, the Decision falsely states "*there is no disclosure . . . of a specific operative embodiment . . . including ... voltage*" [pages 25,26]. However, this is contradicted because the computed sampling of voltage is discussed in the original specification on page 15, lines 15-20. Voltage is discussed on page 26, line 19 through page 27, line 4. Figures 5 shows the voltage. Figures 4, 5, 6 in the OS show the voltage indirectly through the power and power gain (which are the more important engineering parameters).

LAW

The Decision rejects the reasoning of *In re Fouche* [439 F.2d 1237, 1243, 169 USPQ 429, 434, (CCPA 1971)] because an invention in structure, operation and composition) is defined by the claims and the original specification. Here, the Decision does not refer to the present invention but instead is composed of disingenuous statements.

Point 4 - The Office's Disingenuous Statements Are Inconsistent With Accuracy, Precision And Accountability

The Decision ignores 18 U.S.C. §1001 because the submitted Declarations, and Swartz(97), and the copious Exhibits were received (A10-A13,A18), and therefore in their light the Decision is composed of false statements known to be false *a priori* [*Niehot'f v. Sahagian*, 103 A.2d 211 (Me. 1954)]. This is a breach of duty [*Rannard v. Lockheed Aircraft Corp.*, 26 Cal. 2d 149 (1945)].

The Decision ignores 18 U.S.C. §1001 by reference to inaccurate statements and even falsified PFC-PhaseII data previously brought to the attention of the Office in detail [A14-18] and to the attention of the federal court [00-1107, also

00-1108 in the Reply Brief on pages 1-11]. The Decision thus incorporates reference to altered data in a proceeding wherein the law authorizes the administration of an oath [*People v. Pierce*, 66 Cal. 2d 53 (1967)], and as such the Decision rejects the reasoning of many courts [*U.S. v. Price*, 86 S. Ct. 1152, 1157, footnote 7; *Sawtelle v. Farrell*, 70 F.3d 1381, 1387 (1st Cir. 1995); *Leasco Data Processing Equip. Corp. v. Maxwell*, 468 F.2d 1326 (2d Cir. 1972); *Pizarro v. Hotels Concorde Int'l*, C.A., 907 F.2d 1256 (1st Cir. 1990); *Peckham v. Continental Casualty Ins. Co.*, 895 F.2d 830, 836 (1st Cir. 1990); *Donatelli v. National Hockey League*, 893 F.2 459, 465 (1st Cir. 1990))].

Whether The Office Has Complied With The United States Constitution And The Congressional Will.

I

The Decision rejects the controlling authority of the United States Constitution for patentability under Art. I, §8, cl. 8. This is especially serious because inventions involving energy efficiency and energy monitoring have great utility during War. To bypass the controlling authority, the Office has relied upon art other than the actual original specifications and claims, and has used disingenuous and "tongue-in-cheek" statements, and has ignored the Declarations. These actions herald bias rather than compliance with the normal standards of review for patentability statutes arising under Art. I, §8, cl. 8.

II

The Decision rejects the controlling authority of Article I, Section 2. Petitioner is entitled to the privileges and immunities of citizens in the other states, consistent with the reasoning of the Supreme Court in *United States v. Nixon* [418 U.S. 683 (1974) that all are **"equal under the law"**. Here, the Decision ignores that the Office, has allowed selected other patents in the very same field, to wit: Czirr (5,231,290), Westphal (5,215,631), Ahern (5,411,654), Patterson(5,036,031), (5,318,675), (5,372,688), (5,036,031); Aspden, UK-GB 2,231,195B. Thus the Office has denied due process, has not following harmonization, and has ignored Equal protection under the law. In fact, by not following the standards of review, a dual-tiered system is presently operated by the Office, rather than a single uniform just approach.

III

Point 5 - The Constitution And Congress Encourage Progress Not Cover-Up

The Decision rejects the controlling authority of the United States Constitution [Article VI] because states, governments, and officials cannot take actions that interfere with the Constitution or laws passed by Congress.

Here, the controlling authority of Congress has spoken to **"encourage progress"** [*Diamond v. Chakrabarty*] and to encourage ingenuity [447 U.S. 303, 309] and has performed its constitutional role in defining patentable statutory subject matter to include

"anything under the sun that is made by man"
[S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H. R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952)].

In this case, the Office ignores submitted affidavits of probative value from Americans. In this case, the Office ignores peer-reviewed publications from the impeccable *American Nuclear Society*.

The Office astonishingly claims that energy measurement and efficiency has no utility during a time of War. How can this be? First, the Office through its agency of control, the Commerce Department, has sold the present patent application to Communist China on CD-ROM for political donations but steadfastly refuses to allow this American technology to develop after patent issue in the USA as the founding fathers foresaw. Second, during this obstruction of the above-entitled application, the US Patent Office has issued patents using astrology to predict lottery numbers, claiming that they have unique "operability" and "utility". This, frankly insane, behavior by the Office is egregious, morally wrong, scientifically inaccurate, and hurtful to the welfare and security of the United States of America.

IV

The Decision rejects the controlling authority of The 14th Amendment. The Decision rejects the standards of patentability, and is arbitrary and capricious and promotes discrimination and civil rights violation. Petitioner is entitled

to an impartial tribunal [28 U.S. Code Section 144, *Mayberry v. Penna.*, 91 S.8.; *Bloom v. Illinois*, 88 Ct. 499 S.Ct. 1477; *Duncan v. Louisiana*, 88 S.Ct.1444] and equal protection of the laws. In the light of the unrebutted Declarations, "lost" submitted papers, and the corrupted docket in this case under color of law [*U. S. v. Price*, 86 S. Ct. 1152, 1157], there have been systematic violations of the 14th and 5th Amendments' "equal protection" clauses [*Frontiero v. Richardson*, 93 S.Ct. 1736, 411 U.S. 677; *Weiss v. Weiss*, 436 N.Y.S. 2d. 862, 52 N.Y. 2d. 170 (1981)] with serious implications [*Gass v. Lopez*, 95 S. Ct 729; *Wood v. Strickland*, 95 S Ct 992: *U.S. v. Price*, 86 S Ct 1152, 1157, Footnote 7; *Griffin v. Breckenridge*, 91 S Ct 179D; *Gamez v. Toledo*, 42 U.S.C. §1983, and *Bivens v. Six Unknown Named Agents of Fed. Bureau of Narcotics*].

This protection of due process has been denied to Petitioner. The Decision ignores the American Bar Association's comments on new description guidelines of the PTO which says that the PTO should be "technologically neutral.

http://www.uspto.gov/web/offices/com/sol/comments/utilitywd/aba.pdf

This denial and other matters discussed, including the missing pleadings, and simply do not comport with any notion of fair play of justice.

This behavior does not comport with any notion of fair play or justice. Discrimination has previously been important to this court. *****-7*

***** - 7 Civil Rights Acts of 1964 and 1991, the Americans with Disabilities Act of 1990, the Voting Rights Act of 1965, the Equal Credit Opportunity Act, the Equal Educational Opportunities Act of 1974, the Individuals With Disabilities Act, the Equal Pay Act of 1963, the Age Discrimination in Employment Act of 1967, the Age Discrimination Act of 1975, the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, the Community Reinvestment Act of 1977, the Immigration Reform and Control Act of 1986, the Fair Housing Act of 1968, the Family and Medical Leave Act of 1993, and Executive Order 11246 (1965) as amended by Executive Order 11375 (1967).

CONCLUSION

This case may initially appear to be *de minimis* because it involves measurement of small amounts of heat energy, but it is of great and compelling importance when measured by either the particular constitutional mandate of Art. I, §8, cl. 8, or in the light of the number of people dependent upon energy monitoring, efficiency and utilization, and upon alternative energy sources in a time of War.

> **"Today's patent statute is remarkably similar to the law as known to Jefferson in 1793. Protection is offered to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." 35 U.S.C. 101**
>
> **[*Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*]**

The original above-entitled specification, '457, [A148, Claims 13-14, 21-22, and 24-39 (all pending claims)] taught a written description of how the heat-producing activity of a sample can be measured by a multiring calorimeter. Petitioner set forth the best mode contemplated distinctly pointed out and claimed the subject matter which constitutes the invention, wrote an adequate and enabling disclosure, and thus complied and conformed with 35 U.S.C. §112, first paragraph, of the Patent Act by teaching the subject matter, and distinctly pointing out and claiming the subject matter which constitutes the invention, including the best mode contemplated.

The Office's claim that there is a "lack of operability" under 35 U.S.C. §112, ¶1 and "lack of utility" under 35 U.S.C. §101 has only been made by the Office systematically ignoring the original specification and claims, by ignoring the timely-submitted unrebutted Declarations (A52,A55,A56,A58,A61,A28, A32,A36,A38, A44,A47,A49,A50), by ignoring scores of Exhibits [~140 pounds, A19, A71], and by ignoring the Office's own rules and even previous Orders by the Board demanding a response to the Declarants regarding material matters of fact (operability and utility).

Despite the Office's notions, validation comes through peer-review [Swartz. M., 1997, *Fusion Technology*, 31, 63-74] and by testimony of those skilled-in-the-art (Rotegard(A47), Swartz(A28), Bass(A32), Fox(A44 and A56), Mallove(A38 and A58), Chubb (A52), Verner (A36), Kurzweil(A51), Rothwell (A61), Ahern(A50), Schaffer (A55), and Miles(A49) [*In re Wands*]. In this case, affiants have rendered testimony that there is enablement (a question of law; *In re Fouche*). The peer-reviewed publication [Swartz(97)] and Declarants (A52,A55,A56,A58,A61, A28,A32,A36,A38,A44, A47,A49,A50) confirm that the present method to measure heat producing activity of a sample, '457, has both operability and utility. Thus, the publication and Declarants herald operability and utility, and thus enablement both *de facto* and *de jure*.

The Office's notions reveal that the Decision reads not on the original specification and claims, but instead on art cut of a cloth other than this invention and these claims. This nonsubstantive response containing numerous false statements all contradicted by record [Table 3; A147] proves that the Office's notions are quite weak, heralding again the need for allowance of the present invention.

This Petition has authority because Congress has "**encourage(d) progress**" [*Diamond v. Chakrabarty*, 447 U.S. 303 (1980), 447 U.S. 303, No. 79-136, quoting *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 530 -531 (1972); *Graham v. John Deere Co.*, 383 U.S. 1, 7 -10 (1966)] and ingenuity [447 U.S. 303, 309], and has precisely defined patentable statutory subject matter to include

"anything under the sun that is made by man."
[S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H. R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952)].

There is no doubt that Congressional intention and meaning, and that of the statute, was to include an invention involving energy efficiency and monitoring. Petitioner, the *amicus curiae* and Declarants, and many of the affiants in this case associated with the Navy, Air Force, and other agencies, would probably submit that the Office is wrong for inventions related to energy.

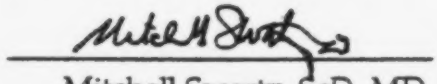
Attention of this court is directed to the fact that when a previous similar case of the Petitioner v. the Patent Office on this matter was submitted to this court [00-1191], the Patent Office and Mr. Dickinson did not even bother to submit a Brief. This is more than an appearance of impropriety. In addition, if this court had taken that Petition, then there probably would have been enforcement of the US Constitution [Article I, Section 8, Clause 8], and the intent of the Constitutional framers and Congressional directive [*Diamond v. Chakrabarty*]. As a result, when the 911 Atrocity arrived on the US soil, the United States would have had a developing –now still urgently needed– alternate source of energy.

Looking ahead, this court has final supervisory jurisdiction over the subject matter. This court should consider this immediately and correct this situation by simply directing the Respondents to abide by their own Rules and standards of review.

The Petitioner regrets any inadequacies in this Petition. This Court has ruled that any *pro se* litigant is entitled to less stringent standards [U.S. Rep volume 404, pages 520-521 (1972)].

Wherefore, Petitioner respectfully requests that for the above reasons that this Petition for Writ of Certiorari be granted.

Very respectfully submitted,



Mitchell Swartz, ScD, MD
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IN THE

Supreme Court of the United States

Mitchell R. Swartz, *Petitioner*

v.

Nicholas P. Godici,
Commissioner for Patents,
Respondent

On Petition For A Writ Of Certiorari
To United States Court Of Appeals
For The Federal Circuit
02 - 1240 (Serial No. 08-406,457)

APPENDICES

APPENDIX A -
DECISION 02-1240 (Serial No. 08/406,457)

Issuing Court: US Court of Appeals for the Federal Circuit
Number of Case: 02-1240 (Serial No. 08/406,457)
Date of Denial: 11/08/02

Mitchell R. Swartz appeals from the decision of the United States Patent and Trademark Office ("PTO") Board of Patent Appeals and interferences ("Board"), Appeal No. 1998-2593, affirming the examiner's final rejection of claims 13, 14, 21, 22, and 24-39 of application Serial No. 081406,457 for lack of operability or utility under 35 U.S.C. §101 and for lack of enablement under 35 U.S.C. § 112, ¶1. We affirm the Board's decision. [1]

"The question of whether a specification provides an enabling disclosure under §112, ¶1, and whether an application satisfies the utility requirement of §101 are closely related" in re Swartz, 232 F.3d 862, 863, 56 USPQ2d 1703, 1703 (Fed. Cir. 2000) ("Swartz I"). In order to be enabling, a patent specification must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation. Enzo Biochem, Inc. v. Calnene, Inc., 188 F.3d 1362, 1371, 52USPQ2d 1129, 1135 (Fed. Cir. 1999) (quoting Genentech, Inc. v. Novo Nordisk, A/S, 108 F.3d 1361, 1365, 42 USPQ2d 1001, 1004 (Fed. Cir. 1997)). Under §101, any patentable invention must be useful and, accordingly, the subject matter of the claim must be operable. Process Control Corp., 190 F.3d 1350, 1358, 52 USPQ2d 1029, 1Q34 (Fed. Cir. 1999). As a result, if the claims in a patent application fail to meet the utility requirement because they are either not useful or inoperative, they will also fail to meet the enablement requirement. See id., 52 USPQ2d at 103435; see also Swartz I, 232 F.3d at 863, 56 USPQ2d at 1704 ("[I]f the claims in an application fail to meet the utility requirement because the invention is inoperative, they also fail to meet the enablement requirement because a person skilled in the art cannot practice the invention.". A claim that requires a means for accomplishing an unattainable result is necessarily inoperative and will consequently be held invalid under either §101 or §112. Raytheon Co. v. Roper Corp., 724 F.2d 951, 956,

1. The Board also reversed the examiner's rejection of claims 3438 of Swartz's application under 35 U.S.C. §103. The PTO does not crossappeal this portion of the Board's decision.

220 USPQ 5927 596 (Fed. Cir. 1983). Utility is a question of fact, In re Cortright, 165 F.3d at 1353, 1356, 49 USPQ2d 1464, 1465 (Fed. Cir. 1999), while lack of enablement is a question of law based on underlying factual inquiries. See Nat'l Recovery Techs., Inc. v. Magnetic Separation Sys., Inc., 166 F.3d 1190, 1194, 49 USPQ2d 1671, 1674 (Fed. Cir. 1999).

On appeal, we review the Board's findings for fact for substantial evidence. See In re Gartside, 203 F.3d 1305, 1315, 53 USPQ2d 1769, 1775 (Fed. Cir. 2000). We review questions of law de novo. See In re Wright, 999 F.2d 1557, 1561(Fed. Cir.1993).

Before the PTO can reject a patent application for lack of utility, it must have reason to doubt the objective truth of the statements provided in the written description. See In re Brana, 51 F.3d 1560, 1566, 34 USPQ2d 1436, 1441 (Fed. Cir. 1995). Once the PTO furnishes evidence demonstrating that one of ordinary skill in the relevant art would reasonably doubt the asserted utility of the invention claimed in the application, however, the burden shifts to the applicant to provide evidence sufficient to convince such a skilled individual of the invention's asserted utility. Swartz I, 232 F.3d at 864, 56 USPQ2d at 1704. As this court held in In re Brana, 51F.3d at 1566, 34 USPQ2d at 1441, the PTO may establish a reason to doubt an invention's asserted utility when the written description "suggests an inherently unbelievable undertaking or involves implausible scientific principles."

In the instant case, the Board concluded that the record evidence supported the examiner's finding that Mr. Swartz's claims are directed to the accomplishment of an 'unattainable result,' i.e., a result that is not attained in a reproducible manner," namely cold fusion. Reviewing the references relied on by the examiner in support of its lack of utility determination, the Board determined that "there is substantial evidence of record that results in the area of 'cold fusion' were irreproducible as of the filing date of this application, and that those skilled in this art would 'reasonably doubt' the asserted utility and operability of cold fusion." The Board further concluded that Mr. Swartz had failed to demonstrate that cold fusion could be reproducibly carried out as of the filing date of his application. Pursuant to Mr. Swartz's request for

reconsideration, the Board reviewed its initial decision, subsequently declining to modify that decision.

On appeal, Mr. Swartz argues that the Board's conclusion on the issue of utility was in error for two reasons. First, he asserts that the Board erred by limiting its utility analysis to the question of cold fusion because his claimed invention possesses utility outside this realm. As the Board stated on Mr. Swartz's request for rehearing, however:

> **Throughout his application, throughout the prosecution, and throughout his briefs, appellant has maintained that his invention relates to and embodies the concept known as "cold fusion." We have scoured appellant's brief and his reply brief and are unable to find therein any reference to the argument now raised by appellant in his request for reconsideration concerning utility other than "cold fusion".**

Because Mr. Swartz made no representations that his claimed invention related to anything other than cold fusion in his written description and throughout the prosecution of this application, he may not now make such representations on appeal. See Swartz I, 232 F.3d at 864, 52 USPQ2d at 1704 ("Mr. Swartz's attempt to show that his claims are directed to a process other than cold fusion must fail. In his written description and throughout prosecution of his application, Mr. Swartz continually represented his invention as relating to cold fusion.") Mr. Swartz's second argument, that the Board erroneously ignored several declarations, exhibits, and references that demonstrated the utility of his claimed invention, is equally unconvincing. The Board's decision reveals that it based its conclusions on a careful examination of the evidence of record, including those references that Mr. Swartz now alleges it disregarded. As the Board found, "the list of references cited by appellant reports experimental studies that present results that may indicate the presence of [cold fusion]. However, this is insufficient to establish utility and enablement within the meaning of the relevant sections of the statute."

On the issue of enablement, Mr. Swartz again argues that the Board erred by focusing on cold fusion and ignoring relevant declarations, exhibits, and references. For the reasons stated above, however, these assertions lack merit. Moreover, as the Board correctly concluded, Mr. Swartz's claims failed to meet §101's utility requirement. As such, these claims could not be enabled under §112, 1, and the Board therefore did not err when it affirmed the examiner's rejections of Mr. Swartz's application on this ground.[2] See Process Control Corp., 190 F.3d at 1358, 52 USPQ2d at 103435. Finally, as to the host of unsupported legal theories that Mr. Swartz advances in support of his claim, we have considered those arguments and find them entirely unpersuasive. Accordingly, the judgment of the Board is affirmed.

AFFIRMED.

Before CLEVENGER, Circuit Judge, FRIEDMAN, Senior Circuit Judge, and PROST Circuit Judge. PER CURIAM.

2 The Board analyzed Mr. Swartz's application in terms of claim 13, which it found to be representative. On appeal, Mr. Swartz takes issue with this analysis, arguing that his claims do not stand or fall with claim 13. Because Mr. Swartz's claims are all directed to cold fusion, however, and because the Board properly concluded that Mr. Swartz had failed to prove that cold fusion could be conducted in a reproducible fashion at the time of the application's filing, the question of claim 13's representative nature is irrelevant, and we therefore do not discuss it further.

APPENDIX B - - ORDER DENYING REHEARING DECISION 02-1240 (Serial No. 08/406,457)

Issuing Court: US Court of Appeals for the Federal Circuit
Number of Case: 02-1240 (Serial No. 08/406,457)
Date of Denial: 12/3/02

ORDER

Before CLEVENGER, Circuit Judge, FRIEDMAN, Senior Circuit Judge, and PROST Circuit Judge.

A petition for rehearing having been filed by the APPELLANT,

UPON CONSIDERATION THEREOF, it is ORDERED that the petition for rehearing be, and the same hereby is, DENIED.

The mandate of the court will issue on December 30, 2002, unless another time becomes appropriate under Rule 41.

FOR THE COURT,
-s Jan Horbaly
Clerk

Dated: December 3, 2002

FILED
U.S. COURT OF APPEALS FOR
THE FEDERAL CIRCUIT
DEC 3, 2002

CC: Mitchell R. Swartz
John M. Whealan

Note: Pursuant to Fed. Cir. R. 47.6, this order is not citable as precedent. It is a public record.

APPENDIX C - Decision of BPAI
Appeal No. 1998-2593 (Serial No. 08/406,457)

Issuing Court: Board Of Patent Appeals And Interferences
Number of Case: Appeal No. 1998-2593 (SN 08/406,457)
Date of Decision: 7/27/01

This is an appeal pursuant to 35 U.S.C. §134 from the final rejection of claims 13, 14, 21, 22 and 24 through 39, all the claims in the application. The subject matter of the claims on appeal is directed to so-called "cold fusion" technology (Specification, pp. 3-7) Representative claims 13 and 34 are reproduced below:

13. In a process for producing a product from a sample of nickel which is loaded with an isotopic fuel using electrolysis, a method to determine the optimum electrical drive condition for said sample and thereby characterize said sample that comprises in combination

holding said sample into a calorimeter containing more than two rings with barriers between said rings,

filling with liquid the volume between each said ring,

supplying said isotopic fuel for said loading into said materia

loading said isotopic fuel into said sample by means of a power supply and electrical circuit,

thermally monitoring said liquid in each said ring,

deriving the thermal response of said sample by computational means including accounting for the mass and temperature distribution of at least one barrier between said rings,

increasing through a series of at least three incremental steps the electric power drive conditions of said electrical circuit,

deriving for each said step data consisting of the thermal output relationship of said sample as function of said drive steps, thereby deriving an optimum drive condition of said sample.

34. In a process for producing a product from a sample of a material which is loaded with an isotopic fuel, a method to maximize the quantity produced of said product by said sample that comprises in combination;

loading said sample with said isotopic fuel by driving said sample as a cathode in combination with an anode and an electrical power supply,

monitoring said product obtained from said sample of material,

varying the input electrical drive conditions,

integrating the accumulated data to determine the optimum electrical drive condition for said sample of material,

characterizing said sample by the peak relative output of said product at said optimum, and

driving said sample at said optimum input electrical drive condition.

Prior art references relied upon by the examiner as evidence of obviousness are:

Pons et al. (Pons) WO 90/10935 Sep. 20, 1990 (published World Intell. Prop. Org. Application)

Fleischmann et al. (Fleischmann '93), "Calorimetry of the Pd-D20 system: from simplicity via complications to simplicity," 176 Physics Letters A, pp. 118–29 (1993)

References of record2 relating to cold fusion theories published following the initial report by Fleischmann and Pons (J. Electroanal. Chem., "Electrochemically induced nuclear fusion of deuterium," 261 J. Electroanal. Chem., pp. 301–08(1989)) are:

Aspden, GB 2 231 195 B, Jul. 11, 1990 (published Great Britain Patent Application)

Albagli et al. (Albagli), "Measurement and Analysis of Neutron and Gamma-Ray Emission Rates, Other Fusion Products, and Power in Electrochemical Cells Having Pd Cathodes," 9 Journal of Fusion Energy, no. 2, pp. 133–48 (1990)

Alber et al. (Alber), "Search for Neutrons from 'Cold Nuclear Fusion'," 333 Phys. A — Atomic Nuclei, pp. 319–20 (1989).

Balke et al. (Balke), "Limits on neutron emission from 'cold fusion' in metal hydrides," 42 Physical Review C, no. 1, pp. 30–37 (July 1990)

Besenbacher et al. (Besenbacher), "Search for Cold Fusion in Plasma-Charged Pd-D and Ti-D Systems," 9 Journal of Fusion Energy, no. 3, pp. 315–17 (1990)

Bishop, "Fusion Brouhaha May Be Settled Soon by Helium Test," The Wall Street Journal, p. B4 (May 10, 1989)

Bishop et al. (Bishop '92), "U.S. Researcher Claims to Replicate Japanese Experiment in 'Cold Fusion'," The Wall Street Journal, p. B4 (July 27, 1992).

Bishop (Bishop '93), "It ain't over till it's over... COLD FUSION," Pooular Science, pp. 47–49, 51, 82 (Aug. 1993)

Bishop (Bishop '96), Untitled, The Wall Street Journal, unnumbered pages (January 29, 1996) reprinted in Clean Energy Technologies, Inc., p. 1-2 (April 23, 1996).

Bosch et al. (Bosch), "Electrochemical Cold Fusion Trials at IPP Garching," 9 Journal of Fusion Energy, no. 2, pp. 165-82, 184-86 (1990)

Browne, "'Fusion' Claim Is Greeted With Scorn by Physicists," The New York Times, pp. A2, A22 (May 1989)

Bush et al. (Bush), "Helium production during the electrolysis of D2O in cold fusion experiments," 304 J. Electroanal. Chem., pp. 271–78 (1991)

Chambers et al. (Chambers), "Evidence for MeV Particle Emission From Ti Charged with Low Energy Deuterium Ions," NRL Memorandum Report 6927, pp. 1-3 (Washington, D.C., Nay. Res. Lab, Dec. 18,1991)

2 Several of these references were cited in the prosecution of Applications 07/339,976, filed April 18, 1989; 07/371,937 filed June 27, 1989; and 07/760,970, filed September 27, 1991, all of which were identified by the appellant as applications with related appeals (Appeal Brief, Paper No. 25, p. 4).

Chandler, "Government lab finds evidence cold fusion is real," The Honolulu Advertiser, 1 unnumbered page (May 25, 1989).

Chapline, "Cold Fusion," appearing in "Proceedings of the NATO Advance Study Institute on the 'Nuclear Equation of the State'," (Peniscola, Spain, May, 1989) UCRL, No. 101583, pp. 1-9 (Livermore, CA, Lawrence Livermore National Laboratory, July 1989)

Clarke, "An Odyssey of Sorts," Discover Magazine, pp. 68-69 (May 1997)

Cooke, "Report of Foreign Travel of J. F. Cooke" Memorandum in ORNL Foreign Trip Report (ORNL/FTR-3341), pp. 1-8, 10-15 (Oak Ridge, TN, Oak Ridge National Laboratory, 1989).

Cribier et al. (Cribier), "Conventional Sources Of Fast Neutrons In 'Cold Fusion' Experiments," 228 PHYSICS LETTERS B, no. 1, pp. 163 – 66 (Sept. 7, 1989)

Dagani (Dagani '92), "Cold fusion takes a licking, but keeps on ticking," Chemical & Engineering News, 1 unnumbered page, (Mar. 1992)

Dagani (Dagani '93), "Latest Cold Fusion Results Fail To Win Over Skeptics," Chemical & Engineering News, pp. 38-41 (June 14, 1993)

Ewing et al. (Ewing), "A Sensitive Multi-Detector Neutron Counter Used to Monitor 'Cold Fusion' Experiments in an Underground Laboratory; Negative Results and Positive Artifacts," 37 IEEE Transactions on Nuclear Science, no. 3, pp. 1165-70 (June 1990)

Faller et al. (Faller), "Investigation of Cold Fusion in Heavy Water," d37 J. Radioanal. Nucl. Chem.. Letters, no. 1, pp. 9-16 (1989)

Fleischmann et al. (Fleischmann '89), "Electrochemically induced. nuclear fusion of deuterium," 261 J. Electroanal. Chem., pp. 301 – 08 (1989)

Fleischmann et al. (Fleischmann '93), "Response to Critique of Physical Letters A Paper," 1 Cold Fusion Times, no. 3, pp. 1-2, 6, 8, 10 – 11 (Fall 1993)

Fleming et al. (Fleming), "Calorimetric Studies of Electrochemical Incorporation of Hydrogen Isotopes into Palladium," 9 Journal of Fusion Energy, no. 4, pp. 517-24 (1990).

Freedman, "A Japanese Claim Generates New Heat," 256 Science, p. 438 (April 24, 1992)

Gozzi et al. (Gozzi), "Nuclear and Thermal Effects During Electrolytic Reduction of Deuterium at Palladium Cathode," 9 Journal of Fusion Energy, no. 3, pp. 241-43 (1990).

Hadfield, "Lukewarm reception for Japanese cold fusion," New Scientist, p. 10 (Oct. 31, 1992)

Hajdas et al. (Hajdas), "Search for Cold – Fusion Events," 72 Solid State Communications, no. 4, pp. 309-12 (Great Britain, Pergamon Press, 1989)

Hagelstein, "Coherent Fusion Theory," 9 Journal of Fusion Energy, no. 4, pp. 451 – 64 (1990)

Henderson et al. (Henderson), "More Searches for Cold Fusion," 9 Journal of Fusion Energy, no. 4, pp. 475-77 (1990)

Hilts, "Significant Errors Reported In Utah Fusion Experiments," The Washington Post, pp. A1, A7 (May 2, 1989).

Hoffman, "BOOK REVIEW - BAD SCIENCE: The Short Life and Weird Times of Cold Fusion," 25 Fusion Technology, pp. 225-27 (March 1994)

Huggins (Huggins '94), "Cold fusion conference gathers fuel for thought", 1 Cold Fusion, no. 1, pp. 36 – 42 (1994)

Huizenga, Cold Fusion: The Scientific Fiasco of the Century, pp. vii, viii, ix, x, xi, 22 – 40, 59 – 89, 128 – 89, 201 – 23 and 240 – 59 (New York, Univ. of Rochester Press, 1992)

Jin et al. (Jin), "Deuterium Absorbability And Anomalous Nuclear Effect of YBCO High Temperature Super-Conductor," ICCF-4, Abstract, N 2.6, p. 1 (undated) in Jin et al. (Jin), 26 Trans. of Fusion Technology, pp. 527-29 (December 1994).

Jones, Steven E. et al. (Jones I), "Examination of Claims of Miles et al. in Pons-Fleischmann-Type Cold Fusion Experiments," 99 J. Phys. Chem., no. 18, pp. 6966-72 (Am. Chem. Soc., May 1995)

Jones, Jonathan E. et al. (Jones II), "Faradaic Efficiencies Less Than 100% during Electrolysis of Water Can Account for Reports of Excess Heat in 'Cold Fusion' Cells," 99 J. Phys. Chem., no. 18, pp. 6973 – 79 (1995)

Kestenbaum, "Cold Fusion - Science or Religion?," 39 Research & Development, no. 5, pp. 51-53, 56 (April 1997)

Kreysa et al. (Kreysa), "A critical analysis of electrochemical nuclear fusion experiments," 266 J. Electroanal. Chem., pp. 437 – 50 (1989)

Kucherov et al. (Kucherov), "Calorimetric and Nuclear Products Measurements at Glow Discharge in Deuterium; Abstract," ICCF-4, p. N 1.2 (Dec. 1993).

Lewis et al. (Lewis), "Searches for low-temperature nuclear fusion of deuterium in palladium," 340 Nature, pp. 525 30 (Aug. 17, 1989)

Lonchampt et al. (Lonchampt '97), "Reproduction of Fleischmann and Pons Experiments," ICCF-6, p. 66 (1997)

Mallove (Mallove '91), "Whither Cold Fusion?," Fire from Ice, (New York, John Wiley & Sons, Inc., 1991).

Mallove, "The publishing fiasco of the century," Cold Fusion, pp. 90 – 93 (1994)

Matsumoto et al. (Matsumoto), "Observation of Heavy Elements Produced During Explosive Cold Fusion," 20 Fusion Technology, pp. 323 – 29 (Nov. 1991)

Melich et al. (Melich), "Some Lessons from 3 Years of Electrochemical Calorimetry," Frontiers of Cold Fusion, pp. 397-400 (Universal Academy Press, Inc., 1993).

Menlove et al. (Menlove), "Measurement of Neutron Emission from Ti and Pd in Pressurized D2 Gas and D20 Electrolysis Cells," 9 Journal of Fusion Energy, no. 4, pp. 495-497, 499, 501, 503, 505 (1990)

Miles (Miles '92), "Letter to Editor," Science Magazine, 4 unnumbered pages (Jan. 17, 1992)

Miles et al. (Miles I), Heat And Helium Measurements in Deuterated Palladium, pp. 1-2, (China Lake, CA, Chemistry Division, Naval Air Warfare Center Weapons Division, Dec. 1993)

Miles et al. (Miles '94B), "Anomalous Effects Involving Excess Power, Radiation, And Helium Production During D20 Electrolysis Using Palladium Cathodes," 25 Fusion Technology, pp. 478-86 (July 1994)

Miles et al. (Miles II), "Anomalous Effects in Deuterated Systems Report," Abstract, 1 unnumbered page, U.S. Navy, 0MB Document No. 0704 – 0188 (Sept. 1996)

Miller (Miller Memo), Memorandum to Dr. Robert W. Bass, pp. 1-9 (Oct. 9, 1997)

Milton (Milton '96), Forbidden Science: Exposing the secrets of suppressed research, pp. 3-11, 24 – 37, 236 – 37.

Miskelly et al. (Miskelly), "Analysis of the Published Calorimetric Evidence for Electrochemical Fusion of Deuterium in Palladium," 246 Science, no. 4931, pp. 793 – 96 (Nov. 10, 1989)

Mizuno et al. (Mizuno), "Anomalous Heat Evolution from SrCeO3-Type PrQton Conductors during Absorption/Desorption of Deuterium in Alternate Electric Field," ICCF-4, Abstract, 2 unnumbered pages (Dec. 1993)

Morrison, "Cold Fusion Update No. 12," ICCF-6, pp. 1-17 (on line <http: //www.skypoint.com/members /jlogajan/files/dromiccf6.txt> Jan. 17, 1997)

Myers et al. (Myers), "Search for Cold Fusion at D/Pd >1 Using Ion Implantation," 9 Journal of Fusion Energy, no. 3, pp. 263-68 (1990)

Neidra et al. (Neidra '96A), "Replication of the Apparent Excess Heat Effect in a Light Water - Potassium Carbonate - Nickel Electrolytic Cell," NASA Memorandum 107167, pp. 1-20 (1996)

Neidra et al. (Neidra '96B), "Replication of The Apparent Excess Heat Effect In A Light Water - Potassium Carbonate - Nickel Electrolytic Cell," 4 Cold Fusion Times, no.3, p.5 (Summer 1996)

Noninski et al. (Noninski '91B), "Comments On 'Measurement And Analysis Of Neutron And Gamma-Ray Emission Rates, Other Fusion Products, And Power In Electrochemical Cells Having Palladium Cathodes'," 19 Fusion Technology, pp. 579-80 (May 1991).

Noninski (Noninski '91), "Excess Heat During The Electrolysis Of A Light Water Solution Of K2C03 With A Nickel Cathode," 21 Fusion Technology, p. 163 (March 1992). 3

Noninski (Noninski '93), "Notes On Two Papers Claiming No Evidence For The Existence Of Excess Energy During The Electrolysis Of 0.1 M LiOD/D20 With Palladium Cathodes," 23 Fusion Technology, p. 474-7 6 (July 1993)

**** 3 -The Form PTO-1449 filed March 17, 1997 erroneously lists this document as appearing in Vol. 19 of Fusion Technology (1991)*

Ohashi et al. (Ohashi), "Decoding of Thermal Data in Fleischmann & Pons Paper," 27 Journal of Nuclear Science and Technology, no. 7, pp. 729 – 32 (July 1989)

Pollack, "Cold Fusion Derided in U.S., Is Hot In Japan," The New York Times, pp. Cl and C12 (Nov. 17, 1992).

Rabinowitz et al. (Rabinowitz), "Opposition and Support for Cold Fusion," 26 Transactions of Fusion Technology, pp. 3-12 (Dec. 1994)

Rehn et al. (Rehn), "The Third International Conference on Cold Fusion: Scrutiny, Invective, and Progress," 18 Scientific Information Bulletin NAVSO P-3580, no. 1, pp. 81-90 (Office of Naval Research Asian Office, Jan.-March 1993)

Rogers et al. (Rogers), "Cold Fusion Reaction Products and Their Measurement," 9 Journal of Fusion Energy, no. 4, pp. 483-85 (1990)

Salamon et al. (Salamon), "Limits on the emission of neutrons, y-rays, electrons and protons from Pons/Fleischmann electrolytic cells," 344 Nature, pp. 401 – 05 (March 29, 1990)

Samgin et al. (Samgin),"The Influence of Conductivity on the Neutron Generation Process in Proton Conducting Solid Electrolytes," ICCF-4, Abstract, 2 unnumbered pages (Dec. 1993)

Sawatimova et al. (Sawatimova '94), "Cathode Material Change After Deuterium Glow Discharge Experiments," 26 Transactions of Fusion Technology, pp. 389-94 (Dec. 1994)

Shani et al. (Shani), "Evidence for a Background Neutron Enhanced Fusion in Deuterium Absorbed Palladium," 72 Solid State Communications, no. 1, pp. 53-57 (Great Britain, Pergamon Press, 1989)

Silvera et al. (Silvera), "Deuterated palladium at temperatures from 4.3 to 400 K and pressures to 105 kbar: Search for cold fusion," 42 Physical Review B, no. 14, pp. 9143-46 (Nov. 15, 1990)

Srinivasan, "Nuclear Fusion in an Atomic Lattice: An Update on The International Status of Cold Fusion Research," (Proposed for publication in Current Science (April 25, 1991))

Stipp, "Georgia Group Outlines Errors That Led To Withdrawal of 'Cold Fusion' Claims," The Wall Street Journal, p. B4 (April 26, 1989)

Storms et al. (Storms), "Electrolytic Tritium Production," 17 Fusion Technology, pp. 680-95 (July 1990)

Storms (Storms '94C), "Some Characteristics of Heat Production Using the 'Cold Fusion' Effect," 26 Transactions of Fusion Technology, pp. 96-100 (Dec. 1994).

Swartz, "Reexamination of a Key Cold Fusion Experiment: 'PhaseII' Calorimetry by the MIT Plasma Fusion Center," 4 Fusion Facts, no. 2, pp. 27 – 42 (Aug. 1992)

Swartz, "Quasi-One Dimensional Model of Electrochemical Loading of Isotopic Fuel Into A Metal," Fusion Technology, pp. 1-15 (March 1992)

Swartz, Isotopic Fuel Loading Coupled To Reactions At An Electrode, 7 unnumbered pages (Weston, MA, JET Technology, Dec. 26, 1993)

Taubes, BAD SCIENCE: The Short Life and Weird Times of Cold Fusion, pp. iii, 303, 425-28, 475-81 (New York, Random House, 1993)

WGBH-TV, "Confusion in a Jar," Journal Graphics, Inc., pp. 2-19 (Show #1802, NOVA, April 30, 1991)

Will, 1 Investigation of Cold Fusion Phenomena in Deuterated Metals, pp. 1-1-1-31 (Salt Lake City, UT, National Cold Fusion Institute, June 1991)

Ziegler et al. (Ziegler), "Electrochemical Experiments in Cold Nuclear Fusion," 62 PHYSICAL REVIEW LETTERS, no. 25, pp. 2929-32 (June 19, 1989)

The appealed claims 13, 14, 21, 22 and 24 through 39 stand rejected under 35 U.S.C. §112, first paragraph, enablement requirement, and under 35 U.S.C. §101 for lack of operability or utility. Additionally, appealed claims 34-38 also stand rejected under 35 U.S.C. §103 over Pons or Fleischmann '93.

BACKGROUND

In the spring of 1989, electrochemists B. Stanley Pons of the University of Utah and Martin Fleischmann of South Hampton University in England reported that they had successfully carried out a sustained nuclear fusion reaction at room temperature (i.e., "cold fusion") in a small jar on a laboratory table top (Fleischmann '89). The Pons/Fleischmann experimentation involved operation of a common electrolytic cell with a palladium cathode and a heavy water (deuterium oxide) electrolyte solvent. The cells used by Pons/Fleischmann were part of a calorimeter[4] whose temperature rise on a few occasions indicated about 10 percent more power leaving the cell than the electrical power

used to run it. Pons/Fleischmann also thought that they had detected a gamma radiation characteristic of neutrons passing through water.

That palladium was a metal capable of absorbing large amounts of gaseous hydrogen was well known, and in the Pons/Fleischmann cold fusion" apparatus, deuterium (heavy hydrogen) ions (D+ ions) allegedly appeared to go into the palladium cathode's crystal lattice about as readily as regular hydrogen ions (H+) However, what generated great skepticism for those skilled in the art were the claims of Pons/Fleischmann that a sustained nuclear fusion reaction at room temperature had been demonstrated which allegedly produced great amounts of energy, for example, four watts of power for each watt of input power. 5

A part of the record before us in this appeal involves publications describing the contemporaneous attempts of those skilled in the art to duplicate the Pons/Fleischmann results. The experimentation described in these documents constitutes compelling objective evidence justifying the initial disbelief of those skilled workers in the Pons/Fleischmann promise of clean, cheap, and abundant energy without side effects from "tabletop" cold fusion.

Exemplary of the initial reports from skilled workers is the statement from the cold fusion team at the United Kingdom Atomic Energy Authority at Harwell (see Cooke, p. 5) that after a comprehensive experimental program involving a monumental effort attempting to verify the Pons/Fleischmann cold fusion claims that

"In none of these experiments was there any evidence of fusion taking place under electrochemical conditions."

and there was no evidence of excess heat generated by any of their cells.

In similar fashion, a team of scientist at the California Institute of Technology (see Lewis, p. 525) indicated that

With a variety of metallurgical pretreatment procedures and different electrolytes, no evidence has been obtained for any excess enthalpy, neutron, gamma ray, tritium or helium production during electrolysis of D20 with palladium cathodes. [Emphasis added.]

Likewise, researchers at Sandia National Laboratory (see Ewing, p. 1165) reported that

4 See page 1 of Kee, "What is the current scientific thinking on cold fusion? Is there any possible validity to this phenomenon?," Scientific American, (circa 1997), on line <http://www.sciam.com/askexpert/physics/physics6.html> (copy attached)

None of the more than thirty cold fusion systems that we investigated produced any detectable neutron emission, with an average statistical uncertainty of 5 neutrons per hour (one standard deviation). No significant neutron bursts were detected.

And from a team of researchers at the Massachusetts Institute of Technology (see Albagli, p. 133), it was stated

Within estimated levels of accuracy, no excess power output or any other evidence of fusion Products was detected. [Emphasis original.]

Finally, in criticizing the Pons/Fleischmann report, Huizenga, in his book entitled "Cold Fusion: The Scientific Fiasco of the Century," concluded at p. 39 that

the craving for fame, notoriety and patent rights took precedence over following the normal scientific procedures.

Against the above background of skepticism and failure of experimenters worldwide to reproduce the results allegedly obtained by Pons/Fleischmann, appellant filed, inter alia, Applications 07/371,937 on June 27, 1989 and 07/760,970 on September 17, 1991 respectively directed to "methods and systems to monitor and accelerate electrochemically induced nuclear fusion reactions" and "methods and systems to control cold nuclear fusion." In each of these applications, "cold fusion was treated as though it were a well-known, readily reproducible process. However, in each of these earlier applications, the. examiner's rejections of the claims for lack of operability or utility under 35 U.S.C. §101 and lack of enablement under 35 U.S.C. §112, first paragraph, were sustained by the Board. See the Board's decisions in Appeal Nos. 1994-2921 and 1994-2920.

Significantly, in In re Swartz, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed Cir. 2000), in an appeal from the Board's decision entered in Appeal No. 1994-2920, our reviewing court stated that the "PTO provided substantial evidence that those skilled in the art would 'reasonably doubt' the asserted utility and operability of cold fusion," based on several references showing that results in the area of cold fusion were irreproducible." Further, the Swartz court indicated that based on the PTO's finding that the application contained no disclosure of any operative embodiment, to practice the invention, a person of ordinary skill in the art would have had to rely on the art known at the filing date, 7 September 17, 1991. Since evidence was not of record that "the concept of the invention could have been practiced by a person skilled in the art at the time of the invention without undue

5 - See Huizenga, second full paragraph at page ix.

experimentation," the court affirmed the judgement of the Board that as a matter of law the application did not satisfy the enablement requirement of 35 U.S.C. §112, first paragraph.

The present application, filed approximately four years after the 07/760,970 application reviewed by the Swartz court, is said to involve "a novel method and system to examine a material for activity concerning the desired reactions." See the Specification, page 7, last paragraph. Referring to the "proper loading" of palladium with enough physically absorbed deuterium to obtain the "desired reactions," appellant again presumptively asserts in his Specification that, in effect, cold fusion is reproducible, but that "[t]he increase in reproducibility of cold fusion has occurred as matter of isotopic fuel loading has been applied." (Emphasis original.) See the Specification at p. 6, lines 12 and 13. In this regard, appellant contends that many negative" results may be caused by "inadequate loading," the "failure to monitor said loading," or the "failure to activate which problems are allegedly solved by following the teachings in, inter alia, appellant's applications 07/760,970 and 07/371,937, neither of which disclosed an operative embodiment. See the specification at p. 6, lines 1-17 and the respective prior Board decisions. Thus, appellant in this appeal, again by presuming that "cold fusion is a well-known, readily reproducible process, attempts to support a finding of utility and operability of the claimed "cold fusion" invention in part by incorporation by reference of subject matter described in the related applications which have previously been reviewed by the Board and our reviewing court.

Unlike the prior applications referred to above, however, the present application reportedly demonstrates that reproducible reactions are achieved when using, inter alia, nickel spiral cathodes with platinum foil anodes under controlled moderate current density conditions. See the Specification at p.26, lines 8-11 and lines 19-21 and Table 3. Apparently, the nickel cathodes are loaded by following the teachings in application 07/371,937 and by lowering the electrode assemblies into a chamber filled with a solution of a LiOD and heavy water (D_2O) See the Specification at p. 15, first full paragraph. Supposedly, appellant's described nickel

6 Numerous other publications referred to in the Answer report similar findings and skepticism from the scientific community regarding the purported results obtained from the original cold fusion experiments.

cathodes possess the correct "variations in microcomposition, morphology, crystalline defects" as well as have the correct geometry and the correct electrical properties for purposes of achieving the desired "cold fusion" reactions. See the Specification at p. 19, lines 4-7 and p. 7, lines 3-5. The "optimum [electrical] drive condition" for the nickel "sample" is determined, in part, through the use of a calorimeter containing more than two rings with barriers between the rings. See appealed claim 13.

In describing Appellant Swartz's work with nickel cathodes in light water in a specially designed ultra-low noise calorimeter (presumably subject matter addressed in the present application), Rothwell[8] indicates that

> *Swartz has spent tremendous effort designing, perfecting and calibrating the calorimeters, which have a complex design I have not seen elsewhere. They are boxes within boxes, and the heat is measured repeatedly as it passes from one box to the next outer box. This could be a superb research tool, but if your purpose is to convince people of the reality of a phenomenon, I feel it is a mistake to use a new calorimeter design. People will say your results are artifacts from a new, untested design. They will have no experience working with similar instruments, and no basis to judge whether your instrument is working or not.*
>
> *Cold fusion is mysterious enough; you should not investigate it with mysterious and exotic instruments, unless you have no choice...*

Thus, appellant in this application seeks to establish the concept or phenomenon of "cold fusion," in part, through the use of data obtained by "exotic" instrumentation which itself raises immediate questions as to its operability.

THE REJECTIONS UNDER 35 U.S.C. §112 AND 35 U.S.C. §101

We address the rejections of the appealed claims under 35 U.S.C. §112, first paragraph, "enablement requirement," and

7 - The sufficiency of an application disclosure under Section 112, first paragraph, "enablement requirement," must be judged as of its filing date. "It is an applicant's obligation to supply an enabling disclosure without reliance on what others may publish after he has filed an application on what is supposed to be a completed invention. If an applicant cannot supply enabling information, he is not yet in a position to file." In re Glass, 492 F.2d 1228, 1232, 181 USPQ 31, 34 (ccpA 1974) . Thus, an appellant cannot cure an insufficient disclosure by relying on publications or other material published after the filing of an application unless it is shown that such later publications are evidence of the state of the art existing on the filing date of the application. In re Hogan, 559 F.2d 595, 605, 194 USPQ 527, 537 (CCPA 1977)

under 35 U.S.C. §101 together, since these rejections involve questions which are closely related. Process Control Corp. v. HydReclaim Corp., 190 F.3d 1350, 1358, 52 USPQ2d 1029, 1034 (Fed. Cir. 1999) To satisfy the "enablement requirement" of the first paragraph of Section 112, a patent application must adequately disclose the claimed invention so as to enable a person skilled in the art to practice the invention at the time the application was filed without undue experimentation. Enzo Biochem, Inc. v. Calgene. Inc., 188 F.3d 1362, 1371–72, 52 USPQ2d 1129, 1136 (Fed. Cir. 1999). The utility requirement of Section 101 mandates that any patentable invention be operable to achieve useful results. See Brooktree Corp. v. Advanced Micro Devices, Inc., 977 F.2d 1555, 1571, 24 USPQ2d 1401, 1412 (Fed. Cir. 1992). Thus, if the claims in an application fail to meet the utility requirement because the invention is inoperative, they also fail to meet the "how-to-use aspect" of the "enablement requirement" because a person skilled in the art cannot practice the invention. See Process Control, 190 F.3d at 1358, 52 USPQ2d at 1034–35; see also In re Ziegler, 992 F.2d 1197, 1200, 26 USPQ2d 1600, 1603 (Fed. Cir. 1993) ("The how to use prong of section 112 incorporates as a matter of law the requirement of 35 U.S.C. §101 that the specification disclose as a matter of fact a practical utility for the invention.") Lack of utility because of inoperativeness is a question of fact, Fregeau v. Mossinghoff, 776 F.2d 1034, 1038, 227 USPQ 848, 851–52 (Fed. Cir. 1985), and the absence of enablement is a legal conclusion based on underlying factual inquiries set forth in, inter alia, In re Wands, 858 F.2d 731, 735–36, 8 USPQ 2d 1400, 1402–03 (Fed. Cir. 1988). See Enzo, 188 F.3d at 1369, 52 USPQ2d at 1134.

As in the previous Swartz appeals before the Board (Appeal Nos. 1994-2921 and 1994-2920), based on the law and the facts of record, we again sustain the examiner's herein stated rejections under the above sections of the statute.

With respect to the questions raised under 35 U.S.C. §101, initially we note the examiner's holding, by reference to his rejection under 35 U.S.C. §112, first paragraph, that the utility of the claimed invention is based upon allegations that would not be readily accepted by a "substantial portion of the scientific community."[2] See the Answer at p. 11, last

[2]See Rothwell, "The 7th International conference on Cold Fusion -Initial Impressions and an Overview," 4 Infinite Energy, no. 19, p. 29 (1998), (copy attached to appellant's Reply Brief, Paper No. 29)

paragraph, and p. 15. Before utility, which is a question of fact, is determined, claims must be interpreted as a matter of law to define the invention to be tested for utility. Raytheon Co. v. Roper Corp., 724 F.2d 951, 956, 220 USPQ 592, 596 (Fed. Cir. 1983), cert. denied, 469 U.S. 835 (1984). Further, "[w]hile a patent covering a meritorious invention should not be struck down because the patentee has misconceived the scientific principle of his invention, the error cannot be overlooked when the misconception is embodied in the claim." Id. Moreover, it is for the "invention as claimed that enablement must exist." Id. Thus, when a claim is directed to accomplishing an unattainable result, the claim is appropriately rejected under either 35 U.S.C. §101 or 35 U.S.C. §112, first paragraph, enablement requirement. Id.

The preamble of appellant's independent claims 13, 21, and 34 is directed to a process for producing a "product" from a sample of material loaded with an isotopic fuel. The effect preamble language to be given is determined by reviewing the entirety of an appellant's disclosure to gain an understanding of what appellant actually invented and intended to encompass by the claim. See Corning Glass Works v. Sumitomo Elect. U.S.A., Inc., 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989) Appellant states in his Specification that "it is a principal object of the present invention to provide a novel method and system to examine a material for activity concerning the desired reactions" (Specification, p. 7). Appellant further states that "[a]nother object of the present invention is to provide a novel method to detect specific materials which demonstrate the activity required for potential bursts, or steady state levels, of these reactions." Id. We note that the only "desired reactions" disclosed in the specification involve the reactions related to cold nuclear fusion (Specification, pp. 3-6). In addition, appellant identifies "excess heat" as "[t]he chief product of the cold fusion reaction(s)" (Specification, p. 4) Helium, "ash," and other particles (tritium, neutrons, rare heavy elements) are also listed among the "product[s] of... cold fusion reaction(s)". Id. Only cold fusion products are, thus, encompassed by the preamble reference to "product" in the recited independent claims.

9 To define those of skill in the art as only those people who investigate "cold fusion" as a real phenomenon is a fundamental error made by appellant.

It is proper to use the specification to interpret what an appellant meant by a word or phrase in the claim. See In re Morris, 127 F.3d 1048, 1053–56, 44 USPQ2d 1023, 1027–30 (Fed. Cir. 1997). The above excerpts clearly indicate that what appellant Swartz invented and intends to be encompassed by the claims directly involves cold fusion reaction. As appellant readily acknowledges in his Appeal Brief at p. 7, the "present invention" relates to the use of cold fusion systems.

Here, since we agree with the examiner that the evidence of record supports a finding that appellant's claims are directed to accomplishing an "unattainable result," i.e., a result that is not attained in a reproducible manner, we sustain the stated rejections under 35 U.S.C. §101 and under the "enablement requirement" of 35 U.S.C. §112, first paragraph.

Like the previous Swartz appeals, there is substantial evidence of record that results in the area of "cold fusion" were irreproducible as of the filing date of this application, and that those skilled in this art would "reasonably doubt" the asserted utility and operability of cold fusion. Even those workers that have continued to experiment and to believe in the cold fusion" process candidly acknowledge that reproducibility remains a problem. Thus, Melvin 5. Miles in a "To whom it may concern" letter[10] dated April 30, 1996, indicated that his experiments "have been very difficult to reproduce in any consistent manner. There are simply too many variables that we do not yet understand." Accordingly, even one year after the filing of the present application, persons investigating "cold fusion" as a real phenomenon conceded that because of yet understood multiple variables, reproducibility was a significant problem.

Moreover, appellant's Specification does not teach one of ordinary skill in this esoteric art how to achieve reproducible results. Although appellant's Specification describes the use of certain nickel cathodes in allegedly successful cold fusion experiments (see our discussion at pp. 18 and 19 of this decision), the examiner found in his Answer at p. 12 that:

The disclosure is insufficient and non-enabling as to how and in what manner, the invention can be carried out so as to provide an operative embodiment. There is no adequate description nor enabling disclosure of specific parameters of a specific operative embodiment of the invention, including exact experimental structure and conditions. It is noted that the specification appears to set information for some of the parameters, however, there is no disclosure... of a specific operative embodiment... , including exact material, purity, density, lattice storage site size,

electrode size, pressure, temperature, voltage, composition and dimensions of the lattice, isotope ratios (e.g., D/Pd), etc. [Emphasis added.]

As we indicated earlier, appellant apparently would have us believe that the described nickel cathodes have the correct "variations in microcomposition, morphology, [and] crystalline defects" required for "cold fusion" reactions, although appellant has failed to specifically disclose just what these parameters are. Thus, appellant's Specification provides no teachings that would enable one of ordinary skill in this art to conduct any reproducible process involving cold fusion without undue experimentation. "Where as here, the claimed invention is the application of an unpredictable technology in the early stages of development, an enabling description in the specification must provide those skilled in the art with a specific and useful teaching." (Emphasis added.) Genentech. Inc. v. Novo NordiskA, 108 F.3d 1361, 1367–68, 42 USPQ2d 1001, 1006 (Fed. Cir. 1997). Appellant's Specification fails to provide such a "specific and useful teaching" in an art area which, if anything, is highly unpredictable and was in an "early stage[] of development" when appellant filed this application.

The examiner relies on a number of references published prior to the filing date of appellant's application to establish that many in the scientific community never accepted the claims that "excess energy" was generated by the cold fusion process (Examiner's Answer, pp. 6-9). Examples of the references relied on by the examiner are Huizenga, Jones I and II, Dagani '93, and Taubes. The examiner relies particularly on Morrison[10] to establish the "current state" of cold fusion on January 17, 1997, a date well after the filing date of this application. Morrison's report indicates that cold fusion was at this time still not fully accepted by a substantial portion of the scientific community. Morrison, who questions the concept of cold fusion, details the events that transpired at the Sixth Cold Fusion Conference. This Report refers to a number of presentations provided before an audience of scientists receptive to the concept of cold fusion. In addition, this Report balances the reference to those presentations by pointing out the general acknowledgment by some presenters that there is still a lack of reproducibility (p. 2, Section 2.1; p.

10 Copy attached to "Declaration of Dr. Mitchell Swartz Supporting Appeal Brief." (Paper No. 25)

4, second full paragraph; p. 6, Section 5.1, item d; p. 8, first paragraph of Section 7) and that no evidence in favor of cold fusion was presented (p. 12, Section 13).

On p.8 of the Examiner's Answer, the Examiner also relies on Rabinowitz (p. 11 of the reference) and the Abstract of Miles II ("[r]eproducibility continues to be the major problem in this controversial research area,") as further evidence respecting the continuing problem with reproducibility of results and on the Miller Memo to establish the lack of concrete evidence of excess heat.

Appellant's response provides a discussion of a number of references and declarations submitted in an attempt to establish the feasibility[12] of the cold fusion process (Appeal Brief, pp. 30-60 and 67-71). Appellant supplemented this discussion with a Reply Brief filed June 29, 1998 (Paper No. 29) and a Supplemental Reply Brief filed August 3, 1998 (Paper No. 31). Nevertheless, even in light of the additional submissions, we find that appellant has failed to demonstrate that as of the filing date of the present application, cold fusion processes could be reproducibly carried out.

Appellant argues that the Office's references are flawed and outdated (Appeal Brief, p. 30, paragraph 86). In addition, appellant argues that some of the references are theoretical criticisms based on older experiments which do not use the techniques disclosed (Appeal Brief, p. 30, paragraph 86). This argument is directed to the examiner's reliance on periodicals, TV shows (NOVA), Taubes, Huizenga, Jones I and II references.

Appellant argues that the reliance on non-peer reviewed periodicals, such as Dagani '93 and Hilts, "are not fair representative appraisals of new technologies"' (Appeal Brief, p. 31, paragraph 87). In support of this argument, the appellant recites a number of non-peer reviewed periodicals that support cold fusion (Bishop '92, Bishop '93, Bishop '96, Pollack and Clarke). The appellant also refers to documentaries by the CBC and BBC which "meticulously researched and reported the truth surrounding cold fusion"

11 Douglas R. O. Morrison, a physicist and the author of this Report, was for 38 years a researcher at CERN, the European laboratory for particle physics near Geneva. Morrison was a longtime observer of cold fusion research. See page 3 of Kee, "What is the current scientific thinking on cold fusion? Is there any possibile validity to this phenomenon?," Scientific American, (circa 1997), on line <http://www.sciam.com/askexpert/physics/physics6.html>.

(Appeal Brief, p. 32, paragraph 88). We note that the periodicals and TV shows cited by the appellant and the examiner amount to press releases or testimonials which both support and reject appellant's cold fusion theory without providing the necessary details and data from which a person with ordinary skill in the art can qualify the nature of the release. These references may only serve as a measure of the pulse of the scientific community with respect to this topic at best. However, due to the inadequacies of the respective disclosures, they offer little in terms of their usefulness and acceptance by the scientific community as a whole vis-a-vis the claimed subject matter.

Concerning Taubes, Huizenga, Jones I and Jones II, the examiner primarily relies on these references to establish that the concept of cold fusion remains the subject of much debate in the scientific community as a whole (Examiner's Answer, Paper No. 30, pp. 6–7) The Taubes publication appears to be a result of an extensive effort to interview people who have been involved in some manner with cold fusion, including those that appear to be in favor as well as those that remain skeptics (pp. 475-481)

Huizenga's publication details the early developments and claims concerning cold fusion that transpired in 1989. A review of the excerpts provided indicates that Huizenga did consider, or at least was aware of, activities during 1990 and 1991 in preparing his book (Huizenga, pp. 128, 132, 134, 136, and 143 are illustrative) In addition, Appendix III of Huizenga's book lists a chronology of events up to June 1991 (note that the filing date of this application is March 1995) related to cold fusion issues. The credibility of his publication derives from the report issued by the Energy Research Advisory Board Cold Fusion Panel, which Huizenga co-chaired.[13] The strength and credibility of the panel comes

12 The extent of appellant's burden to establish the feasibility of cold fusion is highlighted by the remarks of Michael J. Schaffer, a senior scientist and a "fairly neutral observer" at one of the major U.S. fusion research laboratories who stated, 'Mg]iven the extraordinary nature of the claimed cold fusion results, it will take extraordinary high quality, conclusive data to convince most scientists, unless a compelling theoretical explanation is found first." See pages 1-3 of Kee, "What is the current scientific thinking on cold fusion? Is there any possible validity to this phenomenon?," Scientific American, (circa 1997) on line <http://www.sciam.com/askexpert/physics/physics6.html>.

from twenty-two distinguished members that served in the panel (Appendix II, p. 292)

Jones I (Steven E. Jones et al.) evaluates the results of experimentation conducted by M. H. Miles, a proponent of cold fusion (p. 6966), who as noted earlier has candidly acknowledged the problem of reproducibility of cold fusion results. The Jones I article provides a detailed analysis of the claims made by Miles in terms of excess heat production and nuclear product detection. Briefly, the article points out that the claims were based on an experiment that was conducted inadequately (p. 6968, second column; p. 6969, first and second columns) and concludes that the claims of cold fusion are inconsistent (Conclusions; p. 6971). On the other hand, Jones II (Jonathan E. Jones et al.) attempts to provide a traditional explanation for the excess heat by establishing the same as a result from a chemical reaction between H_2 or D_2 with 02 to produce H_20 or D_20 (Discussion,p.6977)

While appellant may argue that these references are irrelevant to the present invention (Appeal Brief, p. 34, paragraph 90), the fact that appellant's invention is directed to the contested field of cold fusion makes them significant. The publications cited by the examiner span a period from 1989 to 1997, which incorporates the date in which this application was filed (March 1995). In addition, the numerous references cited by the appellant also span a similar period. It is quite clear that at the time this application was filed, cold fusion technology was still controversial and not accepted by the scientific community as a whole.

Moreover, it is a fundamental error to define those of ordinary skill in appears to have done, as only those people fusion as a real phenomenon.

Appellant also argues that the Office (PTO) relies on publications which had "significant flaws" and cites a number of references that have "exposed" the same and confirms "the existence' and 'utility'" of cold fusion (Appeal Brief, pp. 34-39, paragraphs 91-101). The appellant argues that the Office relies on publications "which now have been shown to have major errors" by peer-reviewed publications (Emphasis original.) (Appeal Brief, p. 34, paragraph 91). In support of his position, the appellant cites to an article by Fleischmann and Pons responding to criticism of their work ("Response to Critique of Physics Letters A Paper," Cold Fusion Times, Vol. 1, issue 3

(1993)) as well as other articles by Noninski ('91, '91B, '93), Mallove '91, Miles '94B and Milton '96.

The Fleischmann and Pons reference critiques an analysis by Douglas R. O. Morrison, a cold fusion skeptic, whose views have been previously discussed (Decision, pp. 26-27 and footnote 11) To the extent that it portends to answer Mr. Morrison's analysis, the article offers only another opinion concerning cold fusion and not a definitive opinion. The excerpts of the Noninski references before us are not as conclusive as appellant portrays them to be. Each one cautions their conclusion by stating that no explanation for the excess heat has been found so far (Noninski '91, p. 163). The conclusion espoused is merely a different one that could be drawn (Noninski '91B, p. 579) or the conclusion is based on experimentation which is insufficient to prove that excess heat in all experiments "is real" (Noninski '93, p. 476). The Miles 94B reference acknowledges that the discussed research efforts were limited due to the lack of reproducibility of their experiments (p. 484). Note also that these experiments were the subject of the Jones I evaluation that questioned their adequacy. The Mallove '91 (presumably the excerpt of Fire from Ice) and the Milton '96 references offer only a historical opinion of the events that transpired during the early years of cold fusion development (an apparent counterpoint to Huizenga's publication). However, unlike Huizenga, no scientific evaluation refuting or supporting the existence of cold fusion is provided in the excerpt before us. These references, when considered as a whole, do not conclusively prove that the criticisms of Pons/Fleischmann experimentation were without merit, nor do they conclusively prove the existence of cold fusion. They merely evidence that

13 While the report issued by the United States Department of Energy - Energy Research Advisory Board (ERAB) Panel is not part of the record, it is significantly discussed in Chapter VII of Huizenga's publication, Cold Fusion: The Scientific Fiasco of the Century (p. 86) . It is noted that the (ERAB) Panel concluded in its Executive Summary of the report that the experimental results on excess heat from calorimetric cells "reported to date" did not present convincing evidence that "useful" sources of energy would result from the phenomena attributed to cold fusion. The Panel also concluded that experiments "to date" did not present convincing evidence to associate the reported anomalous heat with a nuclear process. Significantly, the stated position of the United States Department of Energy as of October 1997 remained that position set forth in this report. See the Miller Memo, of record.

the controversy and debate about cold fusion is alive and well within the scientific community.

Appellant refers to other numerous references to support the existence and utility of cold fusion (Appeal Brief, p. 35, paragraph 94). In particular, the appellant argues that various organizations including the US Navy, NCFI, Los Alamos National Laboratory (no particular reference), EPRI, NASA (Neidra '96A and 9GB) and the French Atomic Energy Agency (Lonchampt '97) agree with the existence of the field of cold fusion.

The references to EPRI, NASA, and Los Alamos appear to center primarily around reports submitted to Cold Fusion Times, Vol. 4, Issue 3. This publication appears to only report activities concerning cold fusion around the world. However, it provides insufficient information for the reader to reach a scientific conclusion on his own. Lonchampt '97 also fails to provide sufficient information from which to verify its conclusions.

Concerning reports by the US Navy, Chamlers ("Evidence for MeV Particle Emission From Ti Charged with Low Energy Deuterium Ions," NRL Memorandum Report 6927 (1991)) merely invites other researchers to experiment with low energy bombardment of thin samples to search for low level fusion reactions (p. 19). Rehn et al.'s report on "The Third International Conference on Cold Fusion.... " (1993) to the Office of Naval Research Asian Office acknowledges that "a more concerted theoretical effort is now justified" and that much research must still be done to understand the cold fusion phenomenon (pp. 88-8 9). These reports offer no conclusive proof of the existence or the utility of cold fusion.

F. Will's Final Report (National Cold Fusion Institute -1991) is alleged to support the existence of the "cold fusion" phenomenon (Swartz Declaration, paragraph bridging pp. 12-13) See paragraph 98 of the Appeal Brief (p. 37). It appears that appellant is giving much weight to the fact that substantial amounts of financial resources are being invested in this phenomenon to establish its existence. However, financial support is only an indicator of the interest in the phenomenon and not scientific proof of its existence. It should also be noted that the Final Report is not a scientific evaluation of the theory of cold fusion. It is only a report of alleged evidence of cold fusion which lacks the details necessary for appropriate review by the scientific community.

There is no indication that the scientific community as a whole has accepted this evidence. On the contrary, Will acknowledges that the political and financial climate remains generally negative (Will, p. 1-3, second paragraph). Will also places some doubt on the evidence reported in his conclusion by indirectly acknowledging that the alleged excess heat may not be generated by deuterium fusion and that the "possibility that the excess heat is not of nuclear origin can not presently be ruled out" (Will, paragraph bridging pp. 1-16 and 1-17). Contra to appellant's arguments, Will does not confirm the existence of cold fusion, much less address the real problem of reproducible results.

The other various references in paragraphs 95-100 of the Appeal Brief are only casually mentioned by the appellant. For example, Huggins '94 and Kestenbaum appear to be only reports updating the status of cold fusion efforts at different sites. The reports from the various conferences also offer updates on activities related to cold fusion. (Again, note Douglas R. O. Morrison's report on ICCF-6 for a skeptic's views of such activities.)

Storms '94C attempts to eliminate the reproducibility of the Pons-Fleischmann Effect as an issue (Conclusions, p. 99) However, it is evident that reproducibility still remains a controversial topic in cold fusion as late as 1997 (Morrison ICCF-6 report) Sawatimova '94 discusses experiments involving cathode materials before and after irradiation by deuteron ions (p. 389). A result of the experimentation is the discovery that the concentration of impurities increased and among those impurities were elements which "cannot be found in the discharge environment" (Abstract, p. 389). However, the paper stops short of concluding that these elements were the result of a fusion-fission reaction. It only posits the possibility that such a reaction could explain them (Abstract, p. 389)

The appellant lists a number of references, some before and some after the filing date of this application, and declarations to establish the existence of cold fusion (Appeal Brief, pp. 42-46, paragraphs 111–119). While there is much activity dedicated to the study of this phenomenon, there is little conclusive evidence of its utility. The list of references cited by appellant reports experimental studies that present results that indicate the presence of the phenomenon. However, this

is insufficient to establish utility and enablement within the meaning of the relevant sections of the statute.

Appellant argues that Taubes is "wrong and scurrilous" and "has NOTHING TO DO with the original specification" (Emphasis original.) (Appeal Brief, pp. 46-47, paragraph 120). The Examiner's reliance on Taubes is brief and limited to further support his contention that cold fusion is still not accepted by the scientific community (Examiner's Answer, p. 7). Appellant's reliance on publications by Miles '92 and Hoffman '94 which criticize Taubes and his book merely underscore the controversy that exists in the scientific community concerning this phenomenon.

Appellant argues that Jones (presumably Jones I and II) are irrelevant and erroneous (Appeal Brief, pp. 47-48, paragraph 121). Appellant's argument is unclear because it only mentions that Jones' articles contain errors without specifically addressing them. Once more, he relies on publications by scientists that appear to be favorable to the phenomenon to support his alleged contentions. The fact that there may be some disagreement with the methodology of the analysis by Jones again underscores the controversy surrounding the cold fusion phenomenon. Thus, it may be only a matter of a difference of opinion.

Appellant also argues that the Office's reliance on Morrison is misplaced because he "is not believed by serious wellcredentialled [sic]' scientists in the field of cold fusion" (Appeal Brief, p. 48, paragraph 122). The Morrison Report, as indicated previously, details the events that transpired at the Sixth Cold Fusion Conference. This Report refers to a number of presentations provided before an audience of scientists receptive to the concept of cold fusion. In addition, this Report balances the reference to those presentations by pointing out the general acknowledgment by some presenters that there is still a lack of reproducibility (p. 2, Section 2.1; p. 4, second full paragraph; p.6, Section 5.1, item d; p. 8, first paragraph of Section 7) and that no evidence in favor of cold fusion was presented (p. 12, Section 13)

Appellant argues that the lack of any observation of large numbers of neutrons, as supported by the examiner's various references, does not negate "anything at all." See the Appeal Brief, pp. 52-53, paragraphs 127-129. The appellant supports this contention by relying on Shani, who is said to allegedly have monitored "stimulated neutron radiation from

deuterated materials after said deuterated materials were neutronirradiated" and on Faller as reporting tritium increase (Appeal Brief, pp. 52-53, paragraph 129) Shani appears to be another scientific evaluation of the Pons/Fleischmann experiment that does not portend to be a decisive analysis of the Pons/Fleischmann experiment. In fact, it is unclear whether the study may have been done with entirely different equipment (Shani, p. 53). Further, Shani carefully couches his conclusions by stating that the fusion reaction is a possibility and meant to be relevant to interpret the experim6ntal observation of the cold fusion process (Shani, page 57). Faller also couches his conclusion by stating that "[n]o activity was detected that would indicate a sustained fusion reaction had taken place" (Abstract, p. 9) and that the "production of excess tritium... can be explained by processes other than fusion" (Summary, p. 15). The appellant argues that Myers is not applicable because it employed detectors that were not proper for monitoring "these types of reactions" (Appeal Brief, p. 56, paragraph 134) and involved inadequate loading of deuterons and inadequate monitoring of the loading of the deuterons (Appeal Brief, pp. 56-57, paragraphs 135-136) and was "too short" (Appeal Brief, p. 57, paragraph 137).

We now proceed to address appellant's significant arguments concerning the examiner's rejection under 35 U.S.C. §112, first paragraph, as presented in the first Reply Brief (Paper No. 29) In this document, the appellant presents a number of issues that do not fall under the jurisdiction of this Board and a number of issues that merely restate the appellant's positions addressed above. To the extent that the arguments are restated, we consider them to have been appropriately addressed above. However, the appellant presents new arguments concerning the Miller Memo which merit further comment.

Appellant argues that the Miller Memo is irrelevant and that the Office does not account for Miller's call for peer review (Reply Brief, paragraph 42). This reference was cited by the Examiner to indicate that "there is still no concrete evidence of excess heat" (Examiner's Answer, Paper No. 30, p. 8). We find this statement to be accurate (pp. 6-7 of the Memo). The Memo essentially reflects the controversy that still exists in the scientific community with respect to the phenomenon of cold fusion. We have also reviewed the

Second Reply Brief filed August 3, 1998 (Paper No. 31). This communication again restates arguments previously presented by the appeal brief and the first Reply Brief (Paper No. 29). We consider those arguments that pertain to the appeal before this Board as fully responded to above. In light of the foregoing and after careful consideration of the entire record, for the reasons set forth in the Examiner's Answer, we sustain the rejections of the appealed claims under 35 U.S.C. §101 and 35 U.S.C. §112, first paragraph, enablement requirement.

THE REJECTIONS UNDER 35 U.S.C. §103

In considering the examiner's rejection of the appealed claims for obviousness (35 U.S.C. §103), we are guided by the fundamental tenet of patent law that references relied upon to support a rejection under 35 U.S.C. §103 must provide an enabling disclosure, i.e., they must place the claimed invention in the public's possession. In re Payne, 606 F.2d 303, 314, 203 USPQ 245, 255 (CCPA 1979). An invention is not possessed absent some known or obvious way to make it Id.

Here, the technology involved is one based principally on the work of and publication of Pons/Fleischmann which has been substantially discredited by the attempts of those skilled in the art to duplicate the results of their work. Clearly, based on the record before us, the references to Pons et al. and Fleischmann et al. cannot be relied upon as enabling prior art references to support the examiner's obviousness rejection in this appeal. Accordingly, we cannot sustain the examiner's rejections under 35 U.S.C. §103.

SUMMARY

The examiner's rejection of the appealed claims under 35 U.S.C. §101 and 35 U.S.C. §112 is affirmed. The examiner's rejection of the appealed claims under §103 of the statute is reversed. The decision of the examiner, accordingly, is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR §1.136(a)

AFFIRMED

-s ANDREW H. METZ Administrative Patent Judge
-s CHARLES F. WARREN Administrative Patent Judge
-s ROMULO H. DELMENDO Administrative Patent Judge

APPENDIX D - ORDER: REMANDING TO EXAMINER
Appeal No. 98-2593 (Serial No. 08/406,457)

Issuing Court: Board Of Patent Appeals And Interferences
Number of Case: Appeal No. 98-2593 (SN 08/406,457)
Date of Decision: Oct 9, 1998

UNITED STATES PATENT AND TRADEMARK OFFICE

On August 3, 1998, a Second Reply Brief (Paper No. 31) was filed and on September 25, 1998, a Notice of Correction of Appeal Brief (Paper No. 32) was filed. However, there is no indication in the record of whether or not the examiner has considered these papers.

Section 1208.04 of the Manual of Patent Examining Procedure (6th Ed., Rev. 3, July 1997) states:

The examiner must notify appellant of consideration of the reply brief, e.g., by using form paragraph:12.47.

Accordingly, it is

ORDERED that the application is remanded to the Examiner for proper response to the Reply Brief, proper response to the Notice of Correction of Appeal Brief, and for such further action as may be appropriate. It is important that the Board of Patent Appeals and Interferences be informed promptly of any action affecting the status of the appeal (i.e., abandonment, issue, reopening prosecution).

BOARD OF PATENT APPEALS AND INTERFERENCES
By
-s : J CRAIG FEINBERG
Program and Resource Administrator (703) 308-9797

MAILED
Oct 9, 1998

APPENDIX E - CLAIM OF SUBJECT MATTER 02-1240 (Serial No. 08/406,457)

Independent Claim 13 (A188):

In a process for producing a product from a sample of nickel which is loaded with an isotopic fuel using electrolysis, a method to determine the optimum electrical drive condition for said sample and thereby characterize said sample that comprises in combination

holding said sample into a calorimeter containing more than two rings with barriers between said rings,
filling with liquid the volume between each said ring,
supplying said isotopic fuel for said loading into said material,
loading said isotopic fuel into said material by means of a power supply and electrical circuit,
thermally monitoring said liquid in each said ring,
deriving the thermal response of said sample by computational means including accounting for the mass and temperature distribution of at least one barrier between said rings,
increasing through a series of at least three incremental steps the electric power drive conditions of said electrical circuit,
deriving for each said step data consisting of the thermal output relationship of said sample as function of said drive steps,
thereby deriving an optimum drive condition of said sample.

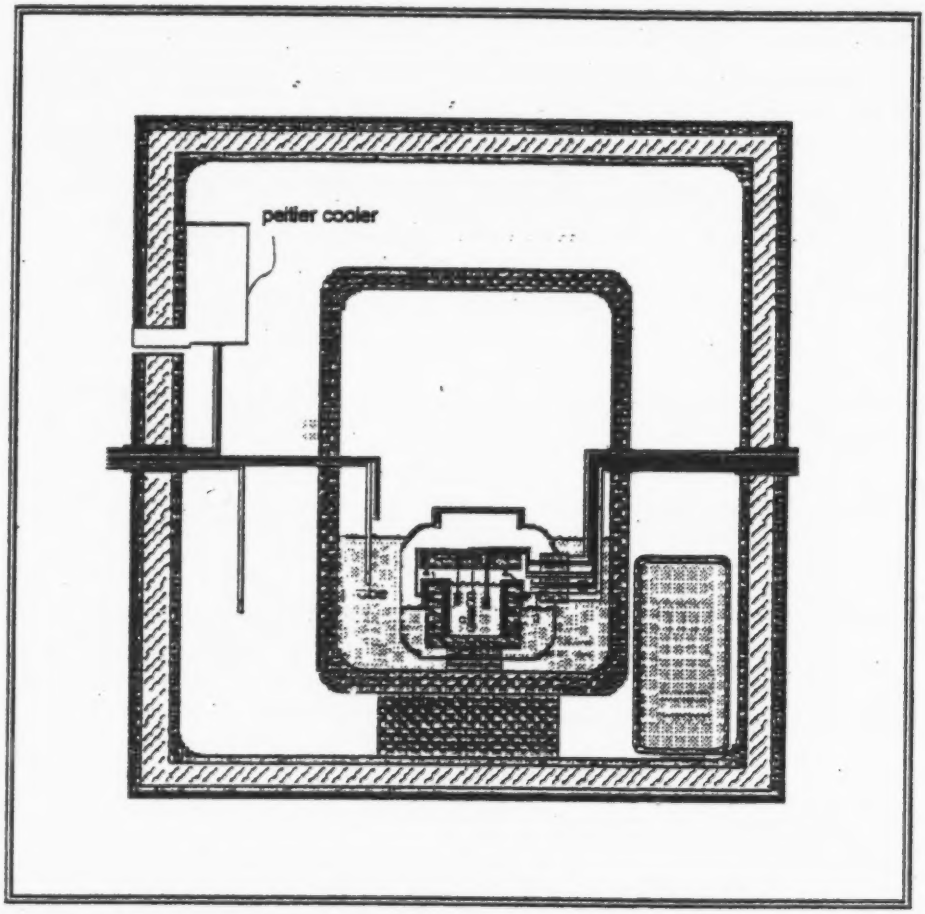
APPENDIX F - False Statements in the Decision involving "specific operative embodiment"

Table 1 - The false statements in the Decision involving purported absence of "disclosure . . . of a specific operative embodiment"

This table compares, by Parameter, each Parameter which the Decision Purports is Not Discussed in the Original Specification (column 1), and the Actual Location of Discussion in the Original Specification (column 2)

Parameter	Actual Location of Discussion in the Original Specification
Temperature	Page 18, line 3 through page 19, line 3. Temperature calculations are discussed on page 22, line 18 through page 23, lines 141 and page 15, lines 15-20.
Voltage	Page 15, lines 15-20, also page 26, line 19 through page 27, line 4. Figures 5 explicitly shows the voltage directly. Figures 4, 5, 6 show the voltage indirectly through the power and power gain (which are the more important parameters in good engineering practice).
Exact Material	Table 1 in the Original Specification (Row 1)
Pressure	Page 17, lines 18-22. Also, with reference to number 132 in Figure 3.
Purity	Thermal noise is discussed, and the purity of the signal is discussed on page 10, lines 14-18, page 15, lines 15-20, page 23, lines 14-17, page 24, lines 14-17, and page 25, lines 4-11.
Isotope Ratios	Discussed, including discussion of the Q1D continuum loading (e.g., D/Pd) model on page 16, lines 11-14, and with reference to the peer-reviewed references, Swartz (1992), Swartz (1993), Swartz (1994).
Density	Page 22, lines 3-11.
Electrode Size	The important engineering parameters are the specific heat (C_{z12}) , mass (M_{z12}), and effective thermal admittance [Y_{12}], discussed on page 24, line 6, page 17, lines 2-12, page 17, lines 2-12, and especially in Figure 1, Figure 4, and Table 1 (Row 7, which lists the dimensions in millimeters).

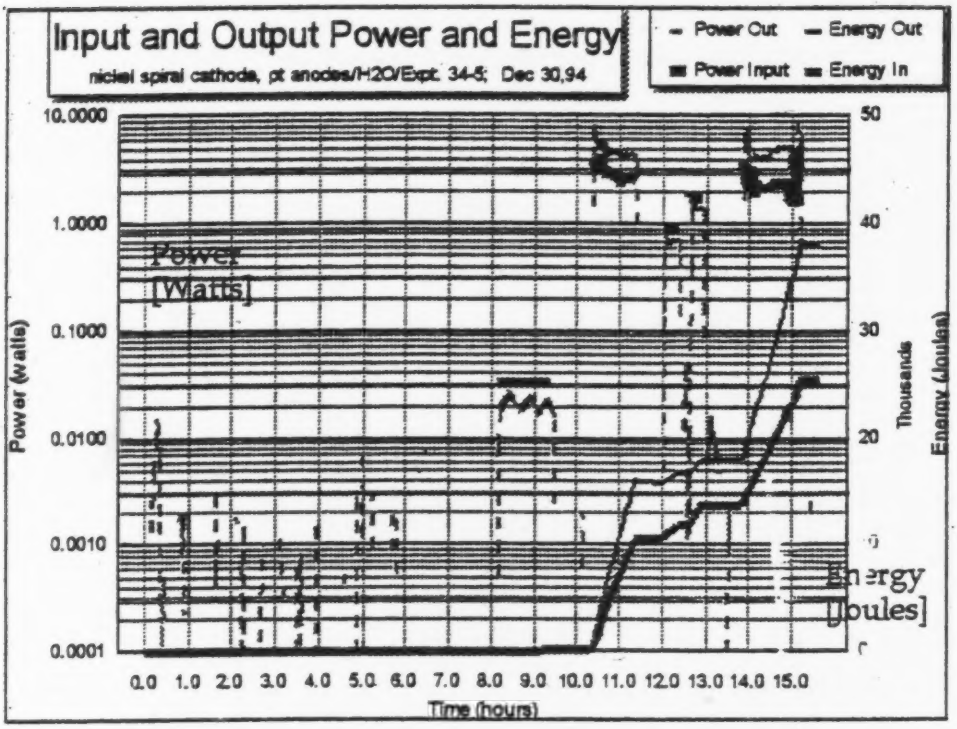
APPENDIX G - MULTI-RING CALORIMETER
02-1240 (Serial No. 08/40c. '57)



APPENDIX G - MULTI-RING CALORIMETER

This is a schematic diagram is the central portion of the five-ring calorimeter. The figure presents the rings and barriers as located from the source-ring (inner ring containing electrodes, ohmic control, thermocouples) to the environment outside of the chamber. For simplicity, not shown are the pump motor, ohmic thermal sources, or gas outlet tube (closed for all of these experiments) in ring 2, the humidity detector in ring 3, or the Styrofoam or wooden thermal isolation supports in rings 4 and 5 (confer reference 8) and the control units discussed and shown in the original Specification (A183) and Swartz(97)(A72).

APPENDIX H - THERMAL SPECTROGRAM DEMONSTRATING OPERABILITY AND UTILITY 02-1240 (Serial No. 08/406,457)



APPENDIX H - THERMAL SPECTROGRAM DEMONSTRATING OPERABILITY AND UTILITY

The Input and Output Power, and Energies, of a platinum foil anode and spiral nickel cathode [H_2O] are shown. The step-like functions are the energy curves [read off the right y-axis]. The powers (thermal background, input, output) are the remainder of the curves and have a logarithmic scale (left y-axis). To the lower left is shown thermal noise (background for this experiment) ranging from 16 to a few milliwatts and extending until the first input (control) pulse at about 8 hours This is shown in the original Specification (A184) and Swartz(97)(A76).

BEST AVAILABLE COPY